AIR QUALITY, HEALTH RISK, GREENHOUSE GAS, AND ENERGY IMPACT REPORT

12300 LAKELAND WAREHOUSE PROJECT

CITY OF SANTA FE SPRINGS, CALIFORNIA

LSA

May 2022

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CITY OF SANTA FE SPRINGS, CALIFORNIA

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LIST OF ABBREVIATIONS AND ACRONYMS

°C	degrees Celsius
°F	degrees Fahrenheit
µg/m^3	micrograms per cubic meter
AB	Assembly Bill
AQMP	Air Quality Management Plan
Basin	South Coast Air Basin
Btu	British thermal units
CAAQS	California ambient air quality standards
CAFE	corporate average fuel economy
CalEEMod	California Emission Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen Code	California Green Building Standards Code
CARB	California Air Resources Board
CARB Handbook	California Air Resources Board Air Quality and Land Use Handbook
CAT	California Climate Action Team
CBC	California Building Code
CBSC	California Building Standards Commission
CCAA	California Clean Air Act
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CH_4	methane
City	City of Santa Fe Springs
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
DPM	diesel particulate matter
EIR	Environmental Impact Report
EMFAC2021	California Emission Factor Model, Version 2021

EO	Executive Order
FCAA	Federal Clean Air Act
GHG	greenhouse gas
GWh	gigawatt-hours
GWP	Global Warming Potential
HFC	hydrofluorocarbons
HI	Hazard Index
HRA	Health Risk Assessment
IPCC	Intergovernmental Panel on Climate Change
LCFS	Low Carbon Fuel Standard
MEI	maximally exposed individual
MICR	maximum individual cancer risk
MMT	million metric tons
MT	metric ton/tons
MPO	Metropolitan Planning Organization
MW	megawatt/megawatts
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NHTSA	National Highway Traffic Safety Administration
NO_2	nitrogen dioxide
NO_X	nitrogen oxides
O_3	ozone
Pb	lead
PFC	perfluorocarbons
PM	suspended particulate matter
ppb	parts per billion
ppm	parts per million
PRC	Public Resources Code
project	12300 Lakeland Warehouse Project
RCP	Regional Comprehensive Plan
ROC	reactive organic compound

ROG	reactive organic gas
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan
SAFE	Safer Affordable Fuel-Efficient
SAFE Vehicles Rule	SAFE Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
sf	square foot/feet
SF_6	sulfur hexafluoride
SO_2	sulfur dioxide
SoCalGas	Southern California Gas Company
sq mi	square mile/miles
TAC	toxic air contaminant
UNFCCC	United Nations Framework Convention on Climate Change
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
VMT	vehicle miles traveled
VOC	volatile organic compound
ZEV	zero-emission vehicle
ZNE	zero net energy

INTRODUCTION

This air quality, heath risk, energy, and greenhouse gas (GHG) impact report has been prepared to evaluate the potential air quality and GHG emissions impacts associated with the 12300 Lakeland Warehouse Project (project) in the City of Santa Fe Springs (City), California. This report follows the guidelines identified by the South Coast Air Quality Management District (SCAQMD) in its California Environmental Quality Act (CEQA) Air Quality handbook,[1] and associated updates. In keeping with these guidelines, this analysis describes existing air quality, air quality and GHG emissions generated from project-related sources, regional air pollution, and global climate change. In addition, this analysis discusses energy use resulting from implementation of the proposed project and evaluates whether the proposed project would result in the wasteful, inefficient, or unnecessary consumption of energy resources or conflict with any applicable plans for renewable energy and energy efficiency.

PROJECT LOCATION AND DESCRIPTION

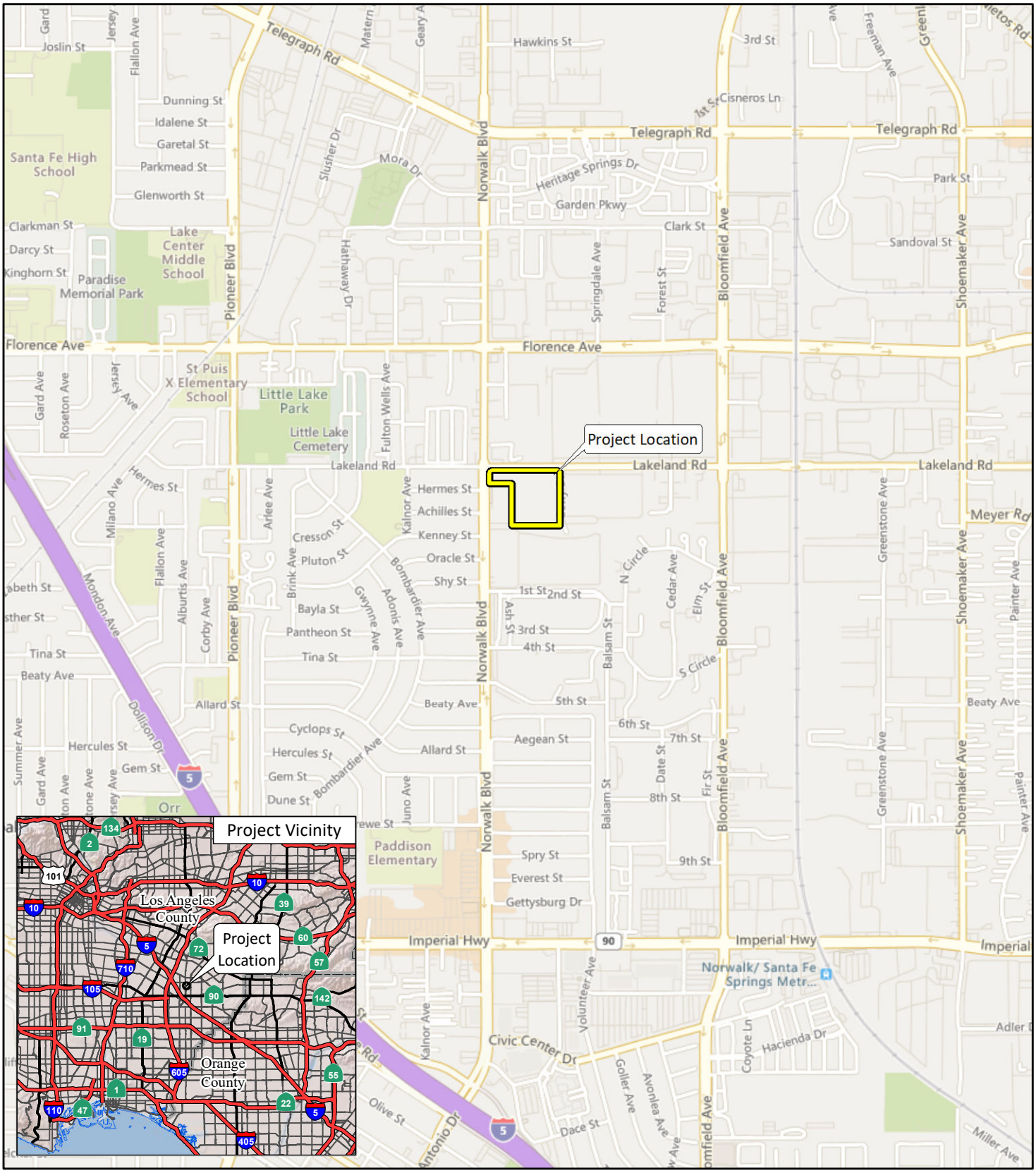
The proposed project is located on the southwest corner of Lakeland Drive and Getty Drive in the City of Santa Fe Springs, Los Angeles County, California. The total project size would be approximately 8.45 acres. See Figure 1, Project Location and Vicinity and Figure 2 for the Project Site Plan, below.

The proposed project would demolish the existing Coast Iron and Steel Co. and construct a 185,294-square-foot (sf) warehouse, including 10 percent cold storage. The speculative warehouse would have approximately 53,952 sf of landscape area. In addition, the project would include a total of 233 parking spaces, 24 dock doors, six stalls for trailer parking, and 14 bicycle stalls of which would be split equally between long term and short term stalls. The proposed project would not require a change to the General Plan land use designation or the current zoning, and would be consistent with the City's General Plan and Zoning Ordinance.

Typical operational characteristics include employees traveling to and from the site, delivery of products to the site, truck loading and unloading, and truck maintenance operations. The project is assumed to operate 24 hours a day, 7 days a week; however, this may shift depending on the tenant, as the hours of operation are unknown. The proposed project would generate approximately 318 average daily trips, including 225 passenger vehicle trips, 18 two-axle truck trips, 18 three-axle truck trips, and 57 four-axle truck trips.

Construction would begin the first quarter of 2023 and would be anticipated to last for approximately 9 months, with project operation beginning in early 2024. The proposed project would include the following sustainability features: drought tolerant landscaping, energy efficient water fixtures, and LEED Silver.

[1] South Coast Air Quality Management District (SCAQMD). 1993. CEQA Air Quality Handbook. Website: http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-(1993) (accessed April 2022).



LSA

LEGEND

Project Location

FIGURE 1

N

0 750 1500

FEET

SOURCE: Bing Maps (2022)

12300 Lakeland Warehouse Project

Regional Project Location

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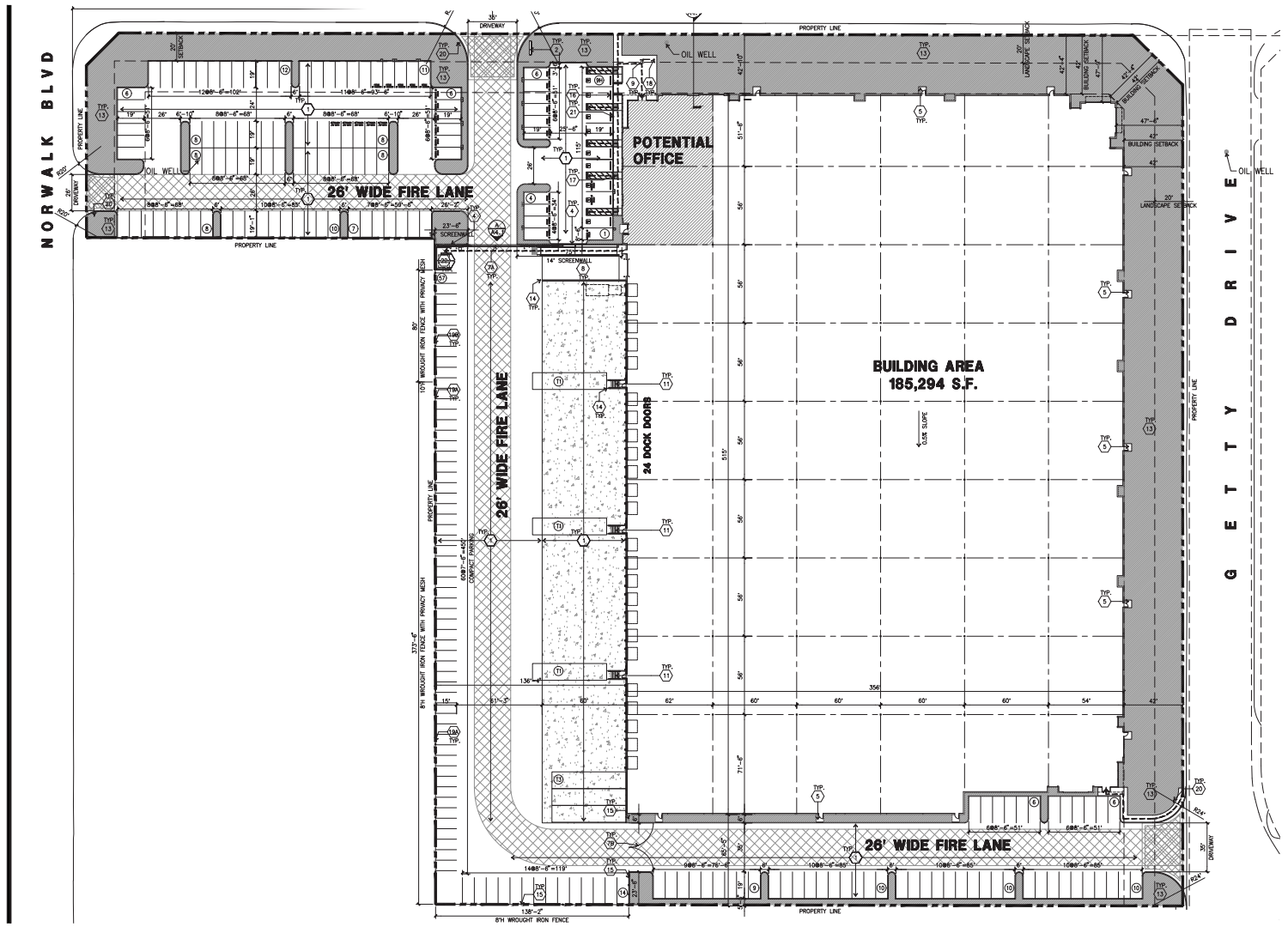

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FIGURE 2

N

0 15 30

FEET

SOURCE: HPA Architecture

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12300 Lakeland Warehouse Project

Site Plan

EXISTING LAND USES IN THE PROJECT AREA

For the purposes of this analysis, sensitive receptors are areas of the population that have an increased sensitivity to air pollution or environmental contaminants. Sensitive receptor locations include residences, schools, daycare centers, hospitals, parks, and similar uses that are sensitive to air quality. Impacts on sensitive receptors are of particular concern because those receptors are the population most vulnerable to the effects of air pollution.[2] The project site is surrounded primarily by commercial and residential uses. The areas adjacent to the project site include the following uses: existing commercial uses to the north opposite of Lakeland Road, industrial uses to the east including Crate & Barrel Warehouse opposite of Getty Drive, commercial uses to the south of project site, and existing single-family home to the west opposite of Norwalk Boulevard.

The closest sensitive receptors to the project site are residential uses such as single-family homes located approximately 100 feet from the project site opposite of Norwalk Boulevard and the Lakeland Villa Mobile Home Park located approximately 175 feet northwest opposite of Lakeland Road.

[2] South Coast Air Quality Management District (SCAQMD). 1993. CEQA Air Quality Handbook. Website: http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-(1993) (accessed May 2022).

BACKGROUND

This section provides current background information on air pollutants and GHG emissions and their health effects. It also provides current regulatory background information, including information from the California Air Resources Board's (CARB) Air Quality and Land Use Handbook[3] (CARB Handbook); a description of the general health risks of toxics, and the significance criteria for project evaluation. In addition, this section provides background information on energy usage in the project area and provides regulatory background information, including federal, State, and local energy regulations.

AIR POLLUTANTS AND HEALTH EFFECTS

Both State and federal governments have established health-based ambient air quality standards (California Ambient Air Quality Standards [CAAQS] and National Ambient Air Quality Standards [NAAQS], respectively) for six criteria air pollutants:[4] carbon monoxide (CO), ozone (O_3), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), lead (Pb), and suspended particulate matter (PM). In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety. Long-term exposure to elevated levels of criteria pollutants may result in adverse health effects. However, emission thresholds established by an air district are used to manage total regional emissions within an air basin based on the air basin's attainment status for criteria pollutants. These emission thresholds were established for individual projects that would contribute to regional emissions and pollutant concentrations and could adversely affect or delay the projected attainment target year for certain criteria pollutants.

Because of the conservative nature of the thresholds and the basin-wide context of individual project emissions, there is no known direct correlation between a single project and localized air quality-related health effects. One individual project that generates emissions exceeding a threshold does not necessarily result in adverse health effects for residents in the project vicinity. This condition is especially true when the criteria pollutants exceeding thresholds are those with regional effects, such as ozone precursors like nitrogen oxides (NO_X) and volatile organic compounds (VOCs).

Occupants of facilities such as schools, daycare centers, parks and playgrounds, hospitals, and nursing and convalescent homes are considered to be more sensitive than the general public to air pollutants because these population groups have increased susceptibility to respiratory disease. Persons engaged in strenuous outdoor work or exercise also have increased sensitivity to poor air quality. Residential areas are considered more sensitive to air quality conditions, compared to commercial and industrial areas, because people generally spend longer periods of time at their residences, with greater associated exposure to ambient air quality conditions. Recreational uses

[3] California Air Resources Board (CARB). 2005. *Air Quality and Land Use Handbook: A Community Health Perspective.* April.

[4] Criteria pollutants are defined as those pollutants for which the federal and State governments have established ambient air quality standards, or criteria, for outdoor concentrations in order to protect public health.

are also considered sensitive compared to commercial and industrial uses due to greater exposure to ambient air quality conditions associated with exercise.

Ozone

Rather than being directly emitted, ozone (smog) is formed by photochemical reactions between NO_X and VOC. Ozone is a pungent, colorless gas. Elevated ozone concentrations result in reduced lung function, particularly during vigorous physical activity. This health problem is particularly acute in sensitive receptors such as the sick, elderly, and young children. Ozone levels peak during the summer and early fall months.

Carbon Monoxide

CO is formed by the incomplete combustion of fossil fuels, almost entirely from automobiles. It is a colorless, odorless gas that can cause dizziness, fatigue, and impairments to central nervous system functions. CO passes through the lungs into the bloodstream, where it interferes with the transfer of oxygen to body tissues.

Particulate Matter

Particulate matter is the term used for a mixture of solid particles and liquid droplets found in the air. Coarse particles are those that are 10 microns or less in diameter, or PM_{10}. Fine, suspended particulate matter with an aerodynamic diameter of 2.5 microns or less, or $PM_{2.5}$, is not readily filtered out by the lungs. Nitrates, sulfates, dust, and combustion particulates are major components of PM_{10} and $PM_{2.5}$. These small particles can be directly emitted into the atmosphere as byproducts of fuel combustion; through abrasion, such as tire or brake lining wear; or through fugitive dust (wind or mechanical erosion of soil). They can also be formed in the atmosphere through chemical reactions. Particulates may transport carcinogens and other toxic compounds that adhere to the particle surfaces and can enter the human body through the lungs.

Nitrogen Dioxide

NO_2 is a reddish brown gas that is a byproduct of combustion processes. Automobiles and industrial operations are the main sources of NO_2. Aside from its contribution to ozone formation, NO_2 also contributes to other pollution problems, including a high concentration of fine particulate matter, poor visibility, and acid deposition. NO_2 may be visible as a coloring component on high pollution days, especially in conjunction with high ozone levels. NO_2 decreases lung function and may reduce resistance to infection.

Sulfur Dioxide

SO_2 is a colorless, irritating gas formed primarily from incomplete combustion of fuels containing sulfur. Industrial facilities also contribute to gaseous SO_2 levels in the region. SO_2 irritates the respiratory tract, can injure lung tissue when combined with fine particulate matter, and reduces visibility and the level of sunlight.

Lead

Leaded gasoline (phased out in the United States beginning in 1973), paint (on older houses and cars), smelters (metal refineries), and the manufacture of lead storage batteries have been the primary sources of lead released into the atmosphere. Lead has multiple adverse neurotoxic health effects, and children are at special risk. Some lead-containing chemicals cause cancer in animals. Lead levels in the air have decreased substantially since leaded gasoline was eliminated. Ambient lead concentrations are only monitored on an as-warranted, site-specific basis in California. On October 15, 2008, the United States Environmental Protection Agency (USEPA) strengthened the NAAQS for lead by lowering it from 1.5 to 0.15 micrograms per cubic meter ($\mu g/m^3$). The USEPA revised the monitoring requirements for lead in December 2010. These requirements focus on airports and large urban areas, resulting in an increase in 76 monitors nationally.

Volatile Organic Compounds

VOCs (also known as reactive organic gases [ROGs] and reactive organic compounds [ROCs]) are formed from the combustion of fuels and the evaporation of organic solvents. VOCs are not defined as criteria pollutants, however, because VOCs accumulate in the atmosphere more quickly during the winter, when sunlight is limited and photochemical reactions are slower, they are a prime component of the photochemical smog reaction. There are no attainment designations for VOCs.

Toxic Air Contaminants

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. TACs are injurious in small quantities and are regulated by the USEPA and the CARB. Some examples of TACs include benzene, butadiene, formaldehyde, and hydrogen sulfide. The identification, regulation, and monitoring of TACs is relatively recent compared to that for criteria pollutants.

TACs do not have ambient air quality standards, but are regulated by the USEPA, CARB, and the SCAQMD. In 1998, the CARB identified particulate matter from diesel-fueled engines as a TAC. The CARB has completed a risk management process that identified potential cancer risks for a range of activities using diesel-fueled engines.[5] High-volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic (e.g., distribution centers and truck stops) were identified as posing the highest risk to adjacent receptors. Other facilities associated with increased risk include warehouse distribution centers, large retail or industrial facilities, high-volume transit centers, and schools with a high volume of bus traffic. Health risks from TACs are a function of both concentration and duration of exposure.

Unlike TACs emitted from industrial and other stationary sources noted above, most diesel particulate matter is emitted from mobile sources—primarily "off-road" sources such as construction and mining equipment, agricultural equipment, and truck-mounted refrigeration units, as well as "on-road" sources such as trucks and buses traveling on freeways and local roadways.

[5] CARB. 2000. Stationary Source Division and Mobile Source Control Division. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles.* October.

Although not specifically monitored, recent studies indicate that exposure to diesel particulate matter may contribute significantly to a cancer risk (a risk of approximately 500 to 700 in 1,000,000) that is greater than all other measured TACs combined.[6] The technology for reducing diesel particulate matter emissions from heavy-duty trucks is well established, and both State and federal agencies are moving aggressively to regulate engines and emission control systems to reduce and remediate diesel emissions. The CARB anticipated that by 2020, average statewide diesel particulate matter concentrations will decrease by 85 percent from levels in 2000 with full implementation of the CARB's Diesel Risk Reduction Plan,[7] meaning that the statewide health risk from diesel particulate matter is expected to decrease from 540 cancer cases in 1,000,000 to 21.5 cancer cases in 1,000,000. The CARB 2000 Diesel Risk Reduction Plan is still the most recent version and has not been updated.

Table A summarizes the sources and health effects of air pollutants discussed in this section. Table B presents a summary of CAAQS and NAAQS.

Table A: Sources and Health Effects of Air Pollutants

Pollutants	Sources	Primary Effects
Carbon Monoxide (CO)	● Incomplete combustion of fuels and other carbon-containing substances, such as motor exhaust ● Natural events, such as decomposition of organic matter	● Reduced tolerance for exercise ● Impairment of mental function ● Impairment of fetal development ● Death at high levels of exposure ● Aggravation of some heart diseases (angina)
Nitrogen Dioxide (NO_2)	● Motor vehicle exhaust ● High temperature stationary combustion ● Atmospheric reactions	● Aggravation of respiratory illness ● Reduced visibility ● Reduced plant growth ● Formation of acid rain
Ozone (O_3)	● Atmospheric reaction of organic gases with nitrogen oxides in sunlight	● Aggravation of respiratory and cardiovascular diseases ● Irritation of eyes ● Impairment of cardiopulmonary function ● Plant leaf injury
Lead (Pb)	● Contaminated soil	● Impairment of blood functions and nerve construction ● Behavioral and hearing problems in children
Suspended Particulate Matter ($PM_{2.5}$ and PM_{10})	● Stationary combustion of solid fuels ● Construction activities ● Industrial processes ● Atmospheric chemical reactions	● Reduced lung function ● Aggravation of the effects of gaseous pollutants ● Aggravation of respiratory and cardiorespiratory diseases ● Increased cough and chest discomfort ● Soiling ● Reduced visibility
Sulfur Dioxide (SO_2)	● Combustion of sulfur-containing fossil fuels ● Smelting of sulfur-bearing metal ores Industrial processes	● Aggravation of respiratory diseases (asthma, emphysema) ● Reduced lung function ● Irritation of eyes ● Reduced visibility ● Plant injury ● Deterioration of metals, textiles, leather, finishes, coatings, etc.

Source: California Air Resources Board (2015).

6 CARB. 2000. Stationary Source Division and Mobile Source Control Division. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles.* October.

7 Ibid.

Table B: Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[a]		Federal Standards[b]		
		Concentration[c]	Method[d]	Primary[c,e]	Secondary[c,f]	Method[g]
Ozone (O_3)[h]	1-Hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	–	Same as Primary Standard	Ultraviolet Photometry
	8-Hour	0.07 ppm (137 µg/m³)		0.070 ppm (137 µg/m³)		
Respirable Particulate Matter (PM_{10})[i]	24-Hour	50 µg/m³	Gravimetric or Beta Attenuation	150 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m³		–		
Fine Particulate Matter ($PM_{2.5}$)[i]	24-Hour	-		35 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	12.0 µg/m³		
Carbon Monoxide (CO)	8-Hour	9.0 ppm (10 mg/m³)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m³)	–	Non-Dispersive Infrared Photometry (NDIR)
	1-Hour	20 ppm (23 mg/m³)		35 ppm (40 mg/m³)		
	8-Hour (Lake Tahoe)	6 ppm (7 mg/m³)		–	–	
Nitrogen Dioxide (NO_2)[j]	Annual Arithmetic Mean	0.03 ppm (57 µg/m³)	Gas Phase Chemi-luminescence	53 ppb (100 µg/m³)	Same as Primary Standard	Gas Phase Chemi-luminescence
	1-Hour	0.18 ppm (339 µg/m³)		100 ppb (188 µg/m³)	-	
Lead (Pb)[l,m]	30-Day Average	1.5 µg/m³	Atomic Absorption	–	–	High-Volume Sampler and Atomic Absorption
	Calendar Quarter	–		1.5 µg/m³ (for certain areas)[l]	Same as Primary Standard	
	Rolling 3-Month Average[i]	–		0.15 µg/m³		
Sulfur Dioxide (SO_2)[k]	24-Hour	0.04 ppm (105 µg/m3)	Ultraviolet Fluorescence	0.14 ppm (for certain areas)	–	Ultraviolet Fluorescence; Spectro-photometry (Pararosaniline Method)
	3-Hour	–		–	0.5 ppm (1300 µg/m³)	
	1-Hour	0.25 ppm (655 µg/m³)		75 ppb (196 µg/m³)[k]	–	
	Annual Arithmetic Mean	–		0.030 ppm (for certain areas)[k]	–	
Visibility-Reducing Particles[l]	8-Hour	See footnote n	Beta Attenuation and Transmittance through Filter Tape.	No Federal Standards		
Sulfates	24-Hour	25 µg/m³	Ion Chromatography			
Hydrogen Sulfide	1-Hour	0.03 ppm (42 µg/m³)	Ultraviolet Fluorescence			
Vinyl Chloride[j]	24-Hour	0.01 ppm (26 µg/m³)	Gas Chromatography			

Source: California Air Resources Board (2016) (Website: https://www.arb.ca.gov/research/aaqs/aaqs2.pdf).

Table notes are provided on the following page.

[a] California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[b] National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact USEPA for further clarification and current national policies.

[c] Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[d] Any equivalent measurement method which can be shown to the satisfaction of the CARB to give equivalent results at or near the level of the air quality standard may be used.

[e] National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

[f] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[g] Reference method as described by the USEPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the USEPA.

[h] On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

[i] On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 µg/m^3 to 12.0 µg/m^3. The existing national 24- hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 µg/m^3, as was the annual secondary standard of 15 µg/m^3. The existing 24-hour PM_{10} standards (primary and secondary) of 150 µg/m^3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

[j] To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

[k] On June 2, 2010, a new 1-hour SO_2 standard was established, and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

[l] The CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[m] The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 µg/m^3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

[n] In 1989, the CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

°C = degrees Celsius
µg/m^3 = micrograms per cubic meter
CARB = California Air Resources Board
mg/m^3 = milligrams per cubic meter
ppb = parts per billion
ppm = parts per million
USEPA = United States Environmental Protection Agency

ENERGY

Electricity

Electricity is a manmade resource. The production of electricity requires the consumption or conversion of energy resources (including water, wind, oil, gas, coal, solar, geothermal, and nuclear resources) into energy. Electricity is used for a variety of purposes (e.g., lighting, heating, cooling, and refrigeration, and for operating appliances, computers, electronics, machinery, and public transportation systems).

According to the most recent data available, in 2020, California's electricity was generated primarily by natural gas (37.06 percent), renewable sources (33.09 percent), large hydroelectric (12.21 percent), nuclear (9.33 percent), coal (2.74 percent), and other and unspecified sources. Total electric generation in California in 2020 was 272,576 gigawatt-hours (GWh), down 2 percent from the 2019 total generation of 277,704 GWh.[8]

The project site is within the service territory of Southern California Edison (SCE). SCE provides electricity to more than 15 million people in a 50,000-square-mile (sq mi) area of Central, Coastal, and Southern California.[9] According to the California Energy Commission (CEC), total electricity consumption in the SCE service area in 2020 was 83,532.6 GWh (32,475 GWh for the residential sector and 51,057 GWh for the non-residential sector). Total electricity consumption in Los Angeles County in 2020 was 65,649.9 GWh (22,913.1 GWh for the residential sector).[10]

Natural Gas

Natural gas is a non-renewable fossil fuel. Fossil fuels are formed when layers of decomposing plant and animal matter are exposed to intense heat and pressure under the surface of the Earth over millions of years. Natural gas is a combustible mixture of hydrocarbon compounds (primarily methane) that is used as a fuel source. Natural gas is found in naturally occurring reservoirs in deep underground rock formations. Natural gas is used for a variety of uses (e.g., heating buildings, generating electricity, and powering appliances such as stoves, washing machines and dryers, gas fireplaces, and gas grills).

Natural gas consumed in California is used for electricity generation (45 percent), residential uses (21 percent), industrial uses (25 percent), and commercial uses (9 percent). California continues to depend on out-of-state imports for nearly 90 percent of its natural gas supply.[11]

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8 California Energy Commission (CEC). 2021a. *2020 Total System Electric Generation*. Website: https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2020-total-system-electric-generation (accessed April 2022).

9 Southern California Edison (SCE). 2020. About Us. Website: https://www.sce.com/about-us/who-we-are (accessed May 2022).

10 CEC. 2020b. Electricity Consumption by County and Entity. Website: http://www.ecdms.energy.ca.gov/elecbycounty.aspx and http://www.ecdms.energy.ca.gov/elecbyutil.aspx (accessed May 2022).

11 CEC. 2021d. Supply and Demand of Natural Gas in California. Website: https://www.energy.ca.gov/data-reports/energy-almanac/californias-natural-gas-market/supply-and-demand-natural-gas-california (accessed April 2022).

The Southern California Gas Company (SoCalGas) is the natural gas service provider for the project site. SoCalGas provides natural gas to approximately 21.8 million people in a 24,000 sq mi service area throughout Central and Southern California, from Visalia to the Mexican border.[12] According to the CEC, total natural gas consumption in the SoCalGas service area in 2020 was 5,231 million therms (2,426 million therms for the residential sector). Total natural gas consumption in Los Angeles County in 2020 was 2,936.7 million therms (1,238 million therms for the residential sector).[13]

Fuel

Petroleum is also a non-renewable fossil fuel. Petroleum is a thick, flammable, yellow-to-black mixture of gaseous, liquid, and solid hydrocarbons that occurs naturally beneath the earth's surface. Petroleum is primarily recovered by oil drilling. It is refined into a large number of consumer products, primarily fuel oil, gasoline, and diesel.

The average fuel economy for light-duty vehicles (autos, pickups, vans, and SUVs) in the United States has steadily increased from about 14.9 miles per gallon (mpg) in 1980 to 22.9 mpg in 2020.[14] Federal fuel economy standards have changed substantially since the Energy Independence and Security Act was passed in 2007. The Act, which originally mandated a national fuel economy standard of 35 mpg by year 2020[15], applies to cars and light trucks of Model Years 2011 through 2020. In March 2020, the United States Environmental Protection Agency (USEPA) and National Highway Traffic Safety Administration (NHTSA) finalized the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks, further detailed below.

Gasoline is the most used transportation fuel in California, with 97 percent of all gasoline being consumed by light-duty cars, pickup trucks, and sport utility vehicles. According to the most recent data available, total gasoline consumption in California was 289,918 thousand barrels or 1,464.7 trillion British Thermal Units (BTU) in 2020.[16] Of the total gasoline consumption, 273,289 thousand barrels or 1,380.7 trillion BTU were consumed for transportation.[17] Based on fuel consumption obtained from CARB's California Emissions Factor Model, Version 2021 (EMFAC2021), approximately

12 Southern California Gas Company (SoCalGas). 2020. About SoCalGas. Website: https://www3.socalgas.com/about-us/company-profile (accessed May 2022).

13 CEC. 2020c. Gas Consumption by County and Entity. Website: http://www.ecdms.energy.ca.gov/gasbycounty.aspx and http://www.ecdms.energy.ca.gov/gasbyutil.aspx (accessed May 2022).

14 U.S. Department of Transportation (DOT). "Table 4-23: Average Fuel Efficiency of U.S. Light Duty Vehicles." Website: https://www.bts.dot.gov/bts/bts/content/average-fuel-efficiency-us-light-duty-vehicles (accessed April 2022).

15 U.S. Department of Energy. 2007. "Energy Independence & Security Act of 2007." Website: https://www.afdc.energy.gov/laws/eisa (accessed April 2022).

16 A British Thermal Unit is defined as the amount of heat required to raise the temperature of one pound of water by one degree Fahrenheit.

17 U.S. Department of Energy, EIA. 2021a. California State Profile and Energy Estimates. Table F3: Motor gasoline consumption, price, and expenditure estimates, 2020. Website: eia.gov/state/seds/data.php?incfile=/state/seds/sep_fuel/html/fuel_mg.html&sid=CA (accessed April 2022).

3,985 million gallons of gasoline and approximately 600 million gallons of diesel will be consumed from vehicle trips in Los Angeles County in 2022.

GREENHOUSE GASES AND GLOBAL CLIMATE CHANGE

Global climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans in recent decades. The Earth's average near-surface atmospheric temperature rose 0.6 ± 0.2° Celsius (°C) or 1.1 ± 0.4° Fahrenheit (°F) in the 20th century. The prevailing scientific opinion on climate change is that most of the warming observed over the last 50 years is attributable to human activities. The increased amounts of carbon dioxide (CO_2) and other GHGs are the primary causes of the human-induced component of warming. GHGs are released by the burning of fossil fuels, land clearing, agriculture, and other activities, and lead to an increase in the greenhouse effect.[18]

GHGs are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced global climate change are:

- CO_2
- Methane (CH_4)
- Nitrous oxide (N_2O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulfur hexafluoride (SF_6)

Over the last 200 years, humans have caused substantial quantities of GHGs to be released into the atmosphere. These extra emissions are increasing GHG concentrations in the atmosphere, and enhancing the natural greenhouse effect, which is believed to be causing global warming. While manmade GHGs include naturally-occurring GHGs such as CO_2, methane, and N_2O, some gases, like HFCs, PFCs, and SF_6 are completely new to the atmosphere.

Certain gases, such as water vapor, are short-lived in the atmosphere. Others remain in the atmosphere for significant periods of time, contributing to climate change in the long term. Water vapor is excluded from the list of GHGs above because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation. For the purposes of this air quality analysis, the term "GHGs" will refer collectively to the six gases listed above.

[18] The temperature on Earth is regulated by a system commonly known as the "greenhouse effect." Just as the glass in a greenhouse lets heat from sunlight in and reduces the heat escaping, greenhouse gases like carbon dioxide, methane, and nitrous oxide in the atmosphere keep the Earth at a relatively even temperature. Without the greenhouse effect, the Earth would be a frozen globe; thus, although an excess of greenhouse gas results in global warming, the naturally occurring greenhouse effect is necessary to keep our planet at a comfortable temperature.

These gases vary considerably in terms of Global Warming Potential (GWP), which is a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The global warming potential is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and length of time that the gas remains in the atmosphere ("atmospheric lifetime"). The GWP of each gas is measured relative to carbon dioxide, the most abundant GHG; the definition of GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to the ratio of heat trapped by one unit mass of CO_2 over a specified time period. GHG emissions are typically measured in terms of pounds or tons of "CO_2 equivalents" (CO_2e). Table C shows the GWP for each type of GHG. For example, SF_6 is 22,800 times more potent at contributing to global warming than CO_2.

Table C: Global Warming Potential of Greenhouse Gases

Gas	Atmospheric Lifetime (Years)	Global Warming Potential (100-Year Time Horizon)
Carbon Dioxide	50-200	1
Methane	12	25
Nitrous Oxide	114	298
HFC-23	270	14,800
HFC-134a	14	1,430
HFC-152a	1.4	124
PFC: Tetrafluoromethane (CF_4)	50,000	7,390
PFC: Hexafluoromethane (C_2F_6)	10,000	12,200
Sulfur Hexafluoride (SF_6)	3,200	22,800

Source: *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the IPCC* (Intergovernmental Panel on Climate Change, 2007).

The following discussion summarizes the characteristics of the six GHGs and black carbon.

Carbon Dioxide

In the atmosphere, carbon generally exists in its oxidized form, as CO_2. Natural sources of CO_2 include the respiration (breathing) of humans, animals and plants, volcanic out gassing, decomposition of organic matter and evaporation from the oceans. Human caused sources of CO_2 include the combustion of fossil fuels and wood, waste incineration, mineral production, and deforestation. Natural sources release approximately 150 billion tons of CO_2 each year, far outweighing the 7 billion tons of man-made emissions of CO_2 each year. Nevertheless, natural removal processes, such as photosynthesis by land- and ocean-dwelling plant species, cannot keep pace with this extra input of man-made CO_2, and consequently, the gas is building up in the atmosphere.

In 2019, total annual CO_2 accounted for approximately 83 percent of California's overall GHG emissions.[19] Transportation is the single largest source of CO_2 in California, which is primarily comprised of on-road travel. Electricity production, industrial and residential sources also make important contributions to CO_2 emissions in California.

[19] CARB. 2021. GHGs Descriptions & Sources in California. Website: ww2.arb.ca.gov/ghg-descriptions-sources (accessed April 2022).

Methane

Methane is produced when organic matter decomposes in environments lacking sufficient oxygen. Natural sources include wetlands, termites, and oceans. Decomposition occurring in landfills accounts for the majority of human-generated CH_4 emissions in California and in the United States as a whole. Agricultural processes such as intestinal fermentation, manure management, and rice cultivation are also significant sources of CH_4 in California. Total annual emissions of CH_4 accounted for approximately 9 percent of GHG emissions in California.[20]

Nitrous Oxide

Nitrous oxide is produced naturally by a wide variety of biological sources, particularly microbial action in soils and water. Tropical soils and oceans account for the majority of natural source emissions. Nitrous oxide is a product of the reaction that occurs between nitrogen and oxygen during fuel combustion. Both mobile and stationary combustion emit N_2O, and the quantity emitted varies according to the type of fuel, technology, and pollution control device used, as well as maintenance and operating practices. Agricultural soil management and fossil fuel combustion are the primary sources of human-generated N_2O emissions in California. Nitrous oxide emissions accounted for approximately 3 percent of GHG emissions in California in 2019.[21]

Hydrofluorocarbons, Perfluorocarbons, and Sulfur Hexafluoride

HFCs are primarily used as substitutes for ozone-depleting substances regulated under the Montreal Protocol.[22] PFCs and SF_6 are emitted from various industrial processes, including aluminum smelting, semiconductor manufacturing, electric power transmission and distribution, and magnesium casting. There is no aluminum or magnesium production in California; however, the rapid growth in the semiconductor industry leads to greater use of PFCs. HFCs, PFCs, and SF_6 accounted for about 5 percent of GHG emissions in California in 2019.[23]

Black Carbon

Black carbon is the most strongly light-absorbing component of PM formed by burning fossil fuels such as coal, diesel, and biomass. Black carbon is emitted directly into the atmosphere in the form of $PM_{2.5}$ and is the most effective form of PM, by mass, at absorbing solar energy. Per unit of mass in the atmosphere, black carbon can absorb one million times more energy than CO_2.[24] Black carbon contributes to climate change both directly, such as absorbing sunlight, and indirectly, such as

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20 CARB. 2021. GHGs Descriptions & Sources in California. Website: ww2.arb.ca.gov/ghg-descriptions-sources (accessed April 2022).

21 Ibid.

22 The Montreal Protocol is an international treaty that was approved on January 1, 1989, and was designated to protect the ozone layer by phasing out the production of several groups of halogenated hydrocarbons believed to be responsible for ozone depletion.

23 CARB. 2021. op. cit.

24 U.S. Environmental Protection Agency (USEPA). 2015. Black Carbon, Basic Information. February 14, 2017. Website: 19january2017snapshot.epa.gov/www3/airquality/blackcarbon/basic.html (accessed April 2022).

affecting cloud formation. However, because black carbon is short-lived in the atmosphere, it can be difficult to quantify its effect on global warming.

Most U.S. emissions of black carbon come from mobile sources (52 percent), particularly from diesel-fueled vehicles. The other major source of black carbon is open biomass burning, including wildfires, although residential heating and industry also contribute. The CARB estimates that the annual black carbon emissions in California will be reduced approximately 50 percent below 2013 levels by 2030.[25]

Effects of Global Climate Change

Effects from global climate change may arise from temperature increases, climate-sensitive diseases, extreme weather events, and air quality. There may be direct temperature effects through increases in average temperature leading to more extreme heat waves and less extreme cold spells. Those living in warmer climates are likely to experience more stress and heat-related problems. Heat-related problems include heat rash and heat stroke. In addition, climate-sensitive diseases may increase, such as those spread by mosquitoes and other disease-carrying insects. Such diseases include malaria, dengue fever, yellow fever, and encephalitis. Extreme events such as flooding and hurricanes can displace people and agriculture. Global climate change may also contribute to air quality problems from increased frequency of smog and particulate air pollution.[26]

Additionally, according to the 2006 California Climate Action Team (CAT) Report,[27] the following applicable climate change effects, which are based on trends established by the United Nations Intergovernmental Panel on Climate Change (IPCC), can be expected in California over the course of the next century:

- The loss of sea ice and mountain snow-pack, resulting in higher sea levels and higher sea surface evaporation rates with a corresponding increase in tropospheric water vapor due to the atmosphere's ability to hold more water vapor at higher temperatures.[28]
- Rise in global average sea level, primarily due to thermal expansion and melting of glaciers and ice caps in the Greenland and Antarctic ice sheets.[29]
- Changes in weather that include widespread changes in precipitation, ocean salinity, wind patterns, and more energetic aspects of extreme weather, including droughts, heavy precipitation, heat waves, extreme cold, and the intensity of tropical cyclones.[30]

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25 CARB. 2017. *Short-Lived Climate Pollutant Reduction Strategy.* March. Website: https://ww2.arb.ca.gov/sites/default/files/2020-07/final_SLCP_strategy.pdf (accessed April 2022).

26 USEPA. 2016. Climate Impacts on Human Health. April. Website: https://19january2017snapshot.epa.gov/climate-impacts/climate-impacts-human-health_.html, last updated on February 24, 2017 (accessed April 2022).

27 California Environmental Protection Agency (CalEPA). 2006. *Climate Action Team Report to Governor Schwarzenegger and the Legislature*. March.

28 Ibid.

29 Ibid.

30 Intergovernmental Panel on Climate Change (IPCC). 2007. *Climate Change 2007: The Physical Science Basis, Summary for Policymakers*. February.

- Decline of the Sierra snowpack, which accounts for approximately one-half of the surface water storage in California by 70 percent to as much as 90 percent over the next 100 years.[31]
- Increase in the number of days conducive to O_3 formation by 25–85 percent (depending on the future temperature scenario) in high O_3 areas by the end of the 21st century.[32]
- High potential for erosion of California's coastlines and seawater intrusion into the Delta and levee systems due to the rise in sea level.[33]

A summary of these potential effects are identified in Table D.

Table D: Potential Impacts of Global Warming and Expected Consequences for California

Potential Water Resource Impacts	Anticipated Consequences Statewide
Reduction of the State's average annual snowpack	● Specifically, the decline of the Sierra snowpack would lead to a loss in half of the surface water storage in California by 70% to 90% over the next 100 years ● Potential loss of 5 million acre-feet or more of average annual water storage in the State's snowpack ● Increased challenges for reservoir management and balancing the competing concerns of flood protection and water supply ● Higher surface evaporation rates with a corresponding increase in tropospheric water vapor
Rise in average sea level	● Potential economic impacts related to coastal tourism, commercial fisheries, coastal agriculture, and ports ● Increased risk of flooding, coastal erosion along the State's coastline, seawater intrusion into the Delta and levee systems
Changes in weather	● Changes in precipitation, ocean salinity, and wind patterns ● Increased likelihood for extreme weather events, including droughts, heavy precipitation, heat waves, extreme cold, and the intensity of tropical cyclones
Changes in the timing, intensity, location, amount, and variability of precipitation	● Potential increased storm intensity and increased potential for flooding ● Possible increased potential for droughts ● Long-term changes in vegetation and increased incidence of wildfires ● Changes in the intensity and timing of runoff ● Possible increased incidence of flooding and increased sedimentation ● Sea level rise and inundation of coastal marshes and estuaries ● Increased potential for salinity intrusion into coastal aquifers (groundwater) ● Increased potential for flooding near the mouths of rivers due to backwater effects
Increased water temperatures	● Increased environmental water demand for temperature control ● Possible increased problems with foreign invasive species in aquatic ecosystems ● Potential adverse changes in water quality, including the reduction of dissolved oxygen levels ● Possible critical effects on listed and endangered aquatic species
Changes in urban and agricultural water demand	● Changes in demand patterns and evapotranspiration
Increase in the number of days conducive to O_3 formation	● Increased temperatures ● Potential health effects, including adverse impacts to respiratory systems

Source: United States Department of the Interior, Environmental Water Account, Draft Supplemental EIS/EIR to the Environmental Water Account Final EIS/EIR, Bureau of Reclamation Mid-Pacific Region, Sacramento, California (October 2007).
EIR = Environmental Impact Report O_3 = ozone
EIS = Environmental Impact Statement

31 CalEPA. 2006, *op. cit*.
32 CalEPA. 2006, *op. cit*.
33 Ibid.

REGULATORY SETTING

AIR QUALITY REGULATIONS

The USEPA and the CARB regulate direct emissions from motor vehicles. The SCAQMD is the regional agency primarily responsible for regulating air pollution emissions from stationary sources (e.g., factories) and indirect sources (e.g., traffic associated with new development), as well as monitoring ambient pollutant concentrations.

Federal Regulations

Federal Clean Air Act

The 1970 Federal Clean Air Act (FCAA) authorized the establishment of national health-based air quality standards and also set deadlines for their attainment. The Federal Clean Air Act Amendments of 1990 changed deadlines for attaining national standards as well as the remedial actions required of areas of the nation that exceed the standards. Under the Clean Air Act, State and local agencies in areas that exceed the national standards are required to develop State Implementation Plans to demonstrate how they will achieve the national standards by specified dates.

State Regulations

California Clean Air Act

In 1988, the California Clean Air Act (CCAA) required that all air districts in the State endeavor to achieve and maintain CAAQS for CO, O_3, SO_2, and NO_2 by the earliest practical date. The California Clean Air Act provides districts with authority to regulate indirect sources and mandates that air quality districts focus particular attention on reducing emissions from transportation and area-wide emission sources. Each nonattainment district is required to adopt a plan to achieve a 5 percent annual reduction, averaged over consecutive 3-year periods, in district-wide emissions of each nonattainment pollutant or its precursors. A Clean Air Plan shows how a district would reduce emissions to achieve air quality standards. Generally, the State standards for these pollutants are more stringent than the national standards.

California Air Resources Board

The CARB is the State's "clean air agency." The CARB's goals are to attain and maintain healthy air quality, protect the public from exposure to toxic air contaminants, and oversee compliance with air pollution rules and regulations.

Assembly Bill 2588 Air Toxics "Hot Spots" Information and Assessment Act. Under Assembly Bill (AB) 2588, stationary sources of air pollutants are required to report the types and quantities of certain substances their facilities routinely released into the air. The goals of the Air Toxics "Hot Spots" Act are to collect emission data, identify facilities having localized impacts, determine health risks, and notify nearby residents of significant risks.

The California Air Resources Board Handbook. The CARB has developed an Air Quality and Land Use Handbook[34] which is intended to serve as a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process. According to the CARB Handbook, air pollution studies have shown an association between respiratory and other non-cancer health effects and proximity to high traffic roadways. Other studies have shown that diesel exhaust and other cancer-causing chemicals emitted from cars and trucks are responsible for much of the overall cancer risk from airborne toxics in California. The CARB Handbook recommends that county and city planning agencies strongly consider proximity to these sources when finding new locations for "sensitive" land uses such as homes, medical facilities, daycare centers, schools, and playgrounds.

Land uses that can produce air pollution sources of concern include freeways, rail yards, ports, refineries, distribution centers, chrome plating facilities, dry cleaners, and large gasoline service stations. Key recommendations in the CARB Handbook include taking steps to avoid siting new, sensitive land uses:

- Within 500 feet of a freeway, urban roads with 100,000 vehicles/day or rural roads with 50,000 vehicles/day;
- Within 1,000 feet of a major service and maintenance rail yard;
- Immediately downwind of ports (in the most heavily impacted zones) and petroleum refineries;
- Within 300 feet of any dry cleaning operation (for operations with two or more machines, provide 500 feet); and
- Within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater).

The CARB Handbook specifically states that its recommendations are advisory and acknowledges land use agencies have to balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues.

The recommendations are generalized and do not consider site-specific meteorology, freeway truck percentages, or other factors that influence risk for a particular project site. The purpose of this guidance is to help land use agencies determine when to further examine project sites for actual health risk associated with the location of new sensitive land uses.

Regional Regulations

South Coast Air Quality Management District

The SCAQMD has jurisdiction over most air quality matters in the South Coast Air Basin (Basin). This area includes all of Orange County, Los Angeles County except for the Antelope Valley, the non-desert portion of western San Bernardino County, and the western and Coachella Valley portions of

34 CARB. 2005. *Air Quality and Land Use Handbook: A Community Health Perspective.* April.

Riverside County. The SCAQMD is the agency principally responsible for comprehensive air pollution control in the Basin and is tasked with implementing certain programs and regulations required by the CAA and the CCAA. The SCAQMD prepares plans to attain CAAQS and NAAQS. SCAQMD is directly responsible for reducing emissions from stationary (area and point) sources. The SCAQMD develops rules and regulations, establishes permitting requirements, inspects emissions sources, and enforces such measures though educational programs or fines, when necessary.

The proposed project could be subject to the following SCAQMD rules and regulations:

- **Regulation IV - Prohibitions:** This regulation sets forth the restrictions for visible emissions, odor nuisance, fugitive dust, various air pollutant emissions, fuel contaminants, start-up/shutdown exemptions, and breakdown events.
    - **Rule 402 - Nuisance:** This rule restricts the discharge of any contaminant in quantities that cause or have a natural ability to cause injury, damage, nuisance, or annoyance to businesses, property, or the public.
    - **Rule 403 - Fugitive Dust:** This rule requires the prevention, reduction, or mitigation of fugitive dust emissions from a project site. Rule 403 restricts visible fugitive dust to a project property line, restricts the net PM_{10} emissions to less than 50 µg/m^3 and restricts the tracking out of bulk materials onto public roads. Additionally, Rule 403 requires an applicant to utilize one or more of the best available control measures (identified in the tables within the rule). Control measures may include adding freeboard to haul vehicles, covering loose material on haul vehicles, watering, using chemical stabilizers, and/or ceasing all activities. Finally, Rule 403 requires that a contingency plan be prepared if so determined by the USEPA. In addition, SCAQMD Rule 403(e), Additional Requirements for Large Operations, includes requirements to provide Large Operation Notification Form 403 N, appropriate signage, additional dust control measures, and employment of a dust control supervisor that has successfully completed the Dust Control training class in the South Coast Air Basin.
- **Regulation XI - Source Specific Standards:** Regulation XI sets emissions standards for different sources.
    - **Rule 1113 - Architectural Coatings:** This rule limits the amount of VOCs from architectural coatings and solvents, which lowers the emissions of odorous compounds.

The SCAQMD is responsible for demonstrating regional compliance with ambient air quality standards but has limited indirect involvement in reducing emissions from fugitive, mobile, and natural sources. To that end, the SCAQMD works cooperatively with the CARB, the Southern California Association of Governments (SCAG), county transportation commissions, local governments, and other federal and State government agencies. It has responded to this requirement by preparing a series of Air Quality Management Plans (AQMPs) to meet CAAQS and NAAQS. SCAQMD and the SCAG are responsible for formulating and implementing the AQMP for the Basin. The main purpose of an AQMP is to bring the area into compliance with federal and State air

quality standards. Every 3 years, SCAQMD prepares a new AQMP, updating the previous plan and 20-year horizon.[35]

SCAQMD approved the 2016 AQMP on March 3, 2017, and submitted the plan to CARB on March 10, 2017. Key elements of the 2016 AQMP include the following:

- Calculating and taking credit for co-benefits from other planning efforts (e.g., climate, energy, and transportation)
- A strategy with fair-share emission reductions at the federal, State, and local levels
- Investment in strategies and technologies meeting multiple air quality objectives
- Seeking new partnerships and significant funding for incentives to accelerate deployment of zero-emission and near-zero emission technologies
- Enhanced socioeconomic assessment, including an expanded environmental justice analysis
- Attainment of the 24-hour $PM_{2.5}$ standard in 2019 with no additional measures
- Attainment of the annual $PM_{2.5}$ standard by 2025 with implementation of a portion of the O_3 strategy
- Attainment of the 1-hour O_3 standard by 2022 with no reliance on "black box" future technology (FCAA Section 182(e)(5) measures)

The SCAQMD is currently preparing the 2022 AQMP, which will address the requirements for meeting the 2015 O_3 standard. A Control Measures Workshop was held on November 10, 2021, to provide an overview of the control measures and strategies that are being developed/considered for the 2022 AQMP. The control measures include updated 2016 AQMP control measures and new control measures related to area, mobile, and stationary sources.

Southern California Association of Governments

SCAG is a council of governments for Los Angeles, Orange, Riverside, San Bernardino, Imperial, and Ventura Counties. It is a regional planning agency and serves as a forum for regional issues relating to transportation, the economy and community development, and the environment. SCAG is the federally designated Metropolitan Planning Organization (MPO) for the majority of the southern California region and is the largest MPO in the nation. With regard to air quality planning, SCAG prepares the Regional Transportation Plan (RTP) and Regional Transportation Improvement Program (RTIP), which address regional development and growth forecasts and form the basis for the land use and transportation control portions of the AQMP and are utilized in the preparation of the air

[35] South Coast Air Quality Management District (SCAQMD), 2016. *Final 2016 Air Quality Management Plan*. March.

quality forecasts and consistency analysis included in the AQMP. The RTP, RTIP, and AQMP are based on projections originating within local jurisdictions.

Although SCAG is not an air quality management agency, it is responsible for developing transportation, land use, and energy conservation measures that affect air quality. SCAG's Regional Comprehensive Plan (RCP) provides growth forecasts that are used in the development of air quality-related land use and transportation control strategies by the SCAQMD. The RCP is a framework for decision-making for local governments, assisting them in meeting federal and State mandates for growth management, mobility, and environmental standards, while maintaining consistency with regional goals regarding growth and changes. Policies within the RCP include consideration of air quality, land use, transportation, and economic relationships by all levels of government.

SCAG adopted the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (Connect SoCal) on September 3, 2020. Connect SoCal is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. Connect SoCal is an important planning document for the region, allowing project sponsors to qualify for federal funding and takes into account operations and maintenance costs, to ensure reliability, longevity, and cost effectiveness. The forecasted development pattern, when integrated with the financially constrained transportation investments identified in Connect SoCal, would reach the regional target of reducing GHG emissions from autos and light-duty trucks by 19 percent by 2035 (compared to 2005 levels).

Local Regulations

City of Santa Fe Springs General Plan

Air quality is addressed in the City of Santa Fe Springs 2040 General Plan.[36] The General Plan includes goals, policies, and implementing actions that work toward clean air with minimal toxic substances and odor, clean air with minimal particulate content, effective and efficient transportation infrastructure, and coordinated and cooperative intergovernmental air quality programs. The following policies from the General Plan would be applicable to the proposed project.

- **Policy COS-9.2: Evaluate Trucking Emissions.** Support low emission solutions and use alternative fuels to improve trucking fleet fuel efficiency.
- **Policy COS-9.3: Reduce Greenhouse Gas Emissions.** Identify the specific activities/uses that the City will undertake to reduce greenhouse gas emissions.
- **Policy COS-9.4: Minimize Air Quality Impacts**. Minimize the air quality impacts of new development projects on established uses and nearby sensitive receptors.

[36] Santa Fe Springs, City of. 2021. *Public Review Draft Reimagine Santa Fe Springs 2040 General Plan*. November. Website: https://www.reimaginesantafesprings.org/files/managed/Document/152/PublicReviewDraftGeneralPlan_11-03-2021.pdf (accessed May 2022).

- **Policy COS-9.6: Alternative Fuels.** Prioritize alternative fuel vehicles for City use, and encourage new residential, commercial, and industrial development be equipped with alternative fueling stations.

- **Policy COS-9.8: Air Quality and Climate Change Analyses.** Required detailed air quality and climate change analyses and mitigation plans for all applications that have the potential to adversely affect air quality.

ENERGY REGULATORY SETTING

Federal and State agencies regulate energy use and consumption through various means and programs. On the federal level, the U.S. Department of Transportation (USDOT), the United States Department of Energy, and the USEPA are three federal agencies with substantial influence over energy policies and programs. Generally, federal agencies influence and regulate transportation energy consumption through establishment and enforcement of fuel economy standards for automobiles and light trucks, through funding of energy-related research and development projects, and through funding for transportation infrastructure improvements. On the State level, the California Public Utilities Commission (CPUC) and the CEC are two agencies with authority over different aspects of energy.

The CPUC regulates privately owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies and serves the public interest by protecting consumers and ensuring the provision of safe, reliable utility service and infrastructure at reasonable rates, with a commitment to environmental enhancement and a healthy California economy.

The CEC is the State's primary energy policy and planning agency. The CEC forecasts future energy needs, promotes energy efficiency, supports energy research, develops renewable energy resources, and plans for/directs state response to energy emergencies. The applicable federal, State, regional, and local regulatory framework is discussed below.

Federal Regulations

Energy Policy Act of 2005

The Energy Policy Act of 2005 seeks to reduce reliance on non-renewable energy resources and provide incentives to reduce current demand on these resources. For example, under this Act, consumers and businesses can obtain federal tax credits for purchasing fuel-efficient appliances and products (including hybrid vehicles), building energy-efficient buildings, and improving the energy efficiency of commercial buildings. Additionally, tax credits are available for the installation of qualified fuel cells, stationary microturbine power plants, and solar power equipment.

Safer Affordable Fuel-Efficient Vehicles Rule

On March 21, 2020, the USEPA and NHTSA finalized the SAFE Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks (SAFE Vehicles Rule). The SAFE Vehicles Rule amends certain existing Corporate Average Fuel Economy and tailpipe CO_2 emissions standards for passenger cars and light trucks and establishes new standards, all covering model years 2021 through 2026. More

specifically, the NHTSA set new Corporate Average Fuel Economy standards for model years 2022 through 2026 and amended its 2021 model year Corporate Average Fuel Economy standards, and the USEPA amended its CO_2 emissions standards for model years 2021 and later.

State Regulations

Assembly Bill 1575, Warren-Alquist Act

In 1975, largely in response to the oil crisis of the 1970s, the State Legislature adopted AB 1575 (also known as the Warren-Alquist Act), which created the CEC. The statutory mission of the CEC is to forecast future energy needs; license power plants of 50 megawatts (MW) or larger; develop energy technologies and renewable energy resources; plan for and direct State responses to energy emergencies; and, perhaps most importantly, promote energy efficiency through the adoption and enforcement of appliance and building energy efficiency standards. AB 1575 also amended Public Resources Code (PRC) Section 21100(b)(3) and *State CEQA Guidelines* Section 15126.4 to require Environmental Impact Reports (EIRs) to include, where relevant, mitigation measures proposed to minimize the wasteful, inefficient, and unnecessary consumption of energy caused by a project. Thereafter, the State Resources Agency created Appendix F to the *State CEQA Guidelines*. Appendix F assists EIR preparers in determining whether a project will result in the inefficient, wasteful, and unnecessary consumption of energy. Appendix F of the *State CEQA Guidelines* also states that the goal of conserving energy implies the wise and efficient use of energy and the means of achieving this goal, including (1) decreasing overall per capita energy consumption; (2) decreasing reliance on fossil fuels such as coal, natural gas, and oil; and (3) increasing reliance on renewable energy sources.

Senate Bill 1389, Energy: Planning and Forecasting

In 2002, the State Legislature passed Senate Bill (SB) 1389, which required the CEC to develop an integrated energy plan every 2 years for electricity, natural gas, and transportation fuels for the California Energy Policy Report. The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for zero emission vehicles (ZEVs) and their infrastructure needs, and encouragement of urban designs that reduce vehicle miles traveled (VMT) and accommodate pedestrian and bicycle access.

In compliance with the requirements of SB 1389, the CEC adopts an Integrated Energy Policy Report every 2 years and an update every other year. The most recently adopted report includes the *2021 Integrated Energy Policy Report*[37] and the *2022 Integrated Energy Policy Report Update.*[38] The *Integrated Energy Policy Report* covers a broad range of topics, including decarbonizing buildings, integrating renewables, energy efficiency, energy equity, integrating renewable energy, updates on

[37] CEC. 2021. *2021 Integrated Energy Policy Report*. California Energy Commission. Docket Number: 21-IEPR-01.

[38] CEC. 2022. *2020 Integrated Energy Policy Report Update*. California Energy Commission. Docket Number: 22-IEPR-01.

Southern California electricity reliability, climate adaptation activities for the energy sector, natural gas assessment, transportation energy demand forecast, and the California Energy Demand Forecast. The *Integrated Energy Policy Report* provides the results of the CEC's assessments of a variety of energy issues facing California. Many of these issues will require action if the State is to meet its climate, energy, air quality, and other environmental goals while maintaining energy reliability and controlling costs.

Renewable Portfolio Standard

SB 1078 established the California Renewable Portfolio Standards program in 2002. SB 1078 initially required that 20 percent of electricity retail sales be served by renewable resources by 2017; however, this standard has become more stringent over time. In 2006, SB 107 accelerated the standard by requiring that the 20 percent mandate be met by 2010. In April 2011, SB 2 required that 33 percent of electricity retail sales be served by renewable resources by 2020. In 2015, SB 350 established tiered increases to the Renewable Portfolio Standards of 40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. In 2018, SB 100 increased the requirement to 60 percent by 2030 and required that all the State's electricity come from carbon-free resources by 2045. SB 100 took effect on January 1, 2019.[39]

Title 24, California Building Code

Energy consumption by new buildings in California is regulated by the Building Energy Efficiency Standards, embodied in Title 24 of the California Code of Regulations (CCR), known as the California Building Code (CBC). The CEC first adopted the Building Energy Efficiency Standards for Residential and Non-residential Buildings in 1978 in response to a legislative mandate to reduce energy consumption in the State. The CBC is updated every 3 years, and the current 2019 CBC went into effect on January 1, 2020. The efficiency standards apply to both new construction and rehabilitation of both residential and non-residential buildings, and regulate energy consumed for heating, cooling, ventilation, water heating, and lighting. The building efficiency standards are enforced through the local building permit process. Local government agencies may adopt and enforce energy standards for new buildings, provided these standards meet or exceed those provided in CCR Title 24.

California Green Building Standards Code (CALGreen Code)

In 2010, the California Building Standards Commission (CBSC) adopted Part 11 of the Title 24 Building Energy Efficiency Standards, referred to as the California Green Building Standards Code (CALGreen Code). The CALGreen Code took effect on January 1, 2011. The CALGreen Code is updated on a regular basis, with the most recent update consisting of the 2019 CALGreen Code standards that became effective January 1, 2020. The CALGreen Code established mandatory measures for residential and non-residential building construction and encouraged sustainable construction practices in the following five categories: (1) planning and design, (2) energy efficiency, (3) water efficiency and conservation, (4) material conservation and resource efficiency, and (5) indoor environmental quality. Although the CALGreen Code was adopted as part of the State's

[39] California Public Utilities Commission (CPUC). 2019. Renewables Portfolio Standard Program. Website: cpuc.ca.gov/rps (accessed April 2022).

efforts to reduce greenhouse gas (GHG) emissions, the CALGreen Code standards have co-benefits of reducing energy consumption from residential and non-residential buildings subject to the standard.

California Energy Efficiency Strategic Plan.

On September 18, 2008, the CPUC adopted California's first Long-Term Energy Efficiency Strategic Plan, presenting a roadmap for energy efficiency in California. The Plan articulates a long-term vision and goals for each economic sector and identifies specific near-term, mid-term, and long-term strategies to assist in achieving those goals. The Plan also reiterates the following four specific programmatic goals known as the "Big Bold Energy Efficiency Strategies" that were established by the CPUC in Decisions D.07-10-032 and D.07-12-051:

- All new residential construction will be zero net energy (ZNE) by 2020.
- All new commercial construction will be ZNE by 2030.
- 50 percent of commercial buildings will be retrofitted to ZNE by 2030.
- 50 percent of new major renovations of State buildings will be ZNE by 2025.

Regional Regulations

There are no regional regulations that apply to the proposed project.

Local Regulations

City of Santa Fe Springs General Plan

Energy is addressed in the City of Santa Fe Springs 2040 General Plan. The General Plan includes goals, policies, and implementing actions that work to improve energy efficiency in City operations and structures. The following policies from the General Plan would be applicable to the proposed project.

- **Policy COS-8.1: Efficiency of existing buildings.** Improve energy efficiency of existing and new buildings, such as adding energy efficient appliances and fixtures, improvements to windows, reflective shingles, roof and wall insulations, and other green building strategies.

- **Policy COS-8.3: Energy Efficiency Strategies**. Encourage energy-efficient strategies of all new projects (public and private), including appropriate structure orientation and site design, passive solar approaches, the use of shade trees to maximize cooling, and to reduce fossil fuel consumption for heating and cooling.

- **Policy COS-8.4: Renewable Energy Industrial Facilities**. Promote the use of renewable energy and/or solar energy for large industrial operations on building rooftops or on large properties and support solar-ready buildings for large industrial buildings and warehouses.

- **Policy COS-8.5: Zero Net Energy.** Pursue Zero Net Energy standards for new public facilities, ensuring new buildings produce as much clean energy as it consumes over the course of a year.

GLOBAL CLIMAGE CHANGE REGULATORY SETTING

This section describes regulations related to Global Climate Change at the federal, State, and local level.

Federal Regulations

The United States has historically had a voluntary approach to reducing GHG emissions. However, on April 2, 2007, the United States Supreme Court ruled that the USEPA has the authority to regulate CO_2 emissions under the FCAA. While there currently are no adopted federal regulations for the control or reduction of GHG emissions, the USEPA commenced several actions in 2009 to implement a regulatory approach to global climate change.

This includes the 2009 USEPA final rule for mandatory reporting of GHGs from large GHG emission sources in the United States. Additionally, the USEPA Administrator signed an endangerment finding action in 2009 under the Clean Air Act, finding that six GHGs (CO_2, CH_4, N_2O, HFCs, PFCs, SF_6) constitute a threat to public health and welfare, and that the combined emissions from motor vehicles cause and contribute to global climate change, leading to national GHG emission standards.

In October 2012, the USEPA and the NHTSA, on behalf of the U.S. Department of Transportation, issued final rules to further reduce GHG emissions and improve corporate average fuel economy (CAFE) standards for light-duty vehicles for model years 2017 and beyond (77 *Federal Register* 62624). The NHTSA's CAFE standards have been enacted under the Energy Policy and Conservation Act since 1978. This national program requires automobile manufacturers to build a single light-duty national fleet that meets all requirements under both federal programs and the standards of California and other states. This program would increase fuel economy to the equivalent of 54.5 miles per gallon, limiting vehicle emissions to 163 grams of CO_2 per mile for the fleet of cars and light-duty trucks by model year 2025 (77 *Federal Register* 62630).

On March 21, 2020, the USEPA and NHTSA finalized the SAFE Vehicles Rule. The SAFE Vehicles Rule amends certain existing CAFE and tailpipe CO_2 emissions standards for passenger cars and light trucks and establish new standards, all covering model years 2021 through 2026. More specifically, NHTSA set new CAFE standards for model years 2022 through 2026 and amended its 2021 model year CAFE standards, and the USEPA amended its CO_2 emissions standards for model years 2021 and later. On May 12, 2021, the NHTSA published a notice of proposed rulemaking in the *Federal Register*, proposing to repeal key portions of the SAFE Vehicles Rule that would have reduced CAFE standards. The final rule repealing portions of the SAFE Vehicles Rule was published on December 29, 2021. The repeal will allow California to set its own GHG standards if it chooses, even if the emissions standards conflict with CAFE standards enacted by the U.S. Department of Transportation.

State Regulations

The CARB is the lead agency for implementing climate change regulations in the State. Since its formation, the CARB has worked with the public, the business sector, and local governments to find solutions to California's air pollution problems. Key efforts by the State are described below.

Assembly Bill 1493 (2002)

In a response to the transportation sector's significant contribution to California's CO_2 emissions, AB 1493 was enacted on July 22, 2002. AB 1493 requires the CARB to set GHG emission standards for passenger vehicles and light duty trucks (and other vehicles whose primary use is noncommercial personal transportation in the State) manufactured in 2009 and all subsequent model years. These standards (starting in model years 2009 to 2016) were approved by the CARB in 2004, but the needed waiver of CCAA Preemption was not granted by the USEPA until June 30, 2009. The CARB responded by amending its original regulation, now referred to as Low Emission Vehicle III, to take effect for model years starting in 2017 to 2025. The Trump administration revoked California's waiver in 2019, but the Biden administration restored California's waiver in 2021.

Executive Order S-3-05 (2005)

Governor Arnold Schwarzenegger signed Executive Order (EO) S-3-05 on June 1, 2005, which proclaimed that California is vulnerable to the impacts of climate change. To combat those concerns, the executive order established California's GHG emissions reduction targets, which established the following goals:

- GHG emissions should be reduced to 2000 levels by 2010;
- GHG emissions should be reduced to 1990 levels by 2020; and
- GHG emissions should be reduced to 80 percent below 1990 levels by 2050.

The Secretary of the California Environmental Protection Agency (CalEPA) is required to coordinate efforts of various State agencies in order to collectively and efficiently reduce GHGs. A biannual progress report must be submitted to the Governor and State Legislature disclosing the progress made toward GHG emission reduction targets. In addition, another biannual report must be submitted illustrating the impacts of global warming on California's water supply, public health, agriculture, the coastline, and forestry, and report possible mitigation and adaptation plans to address these impacts.

The Secretary of CalEPA leads this CAT made up of representatives from State agencies as well as numerous other boards and departments. The CAT members work to coordinate statewide efforts to implement global warming emission reduction programs and the State's Climate Adaptation Strategy. The CAT is also responsible for reporting on the progress made toward meeting the statewide GHG targets that were established in the executive order and further defined under AB 32, the "Global Warming Solutions Act of 2006." The first CAT Report to the Governor and the Legislature was released in March 2006, which it laid out 46 specific emission reduction strategies for reducing GHG emissions and reaching the targets established in the Executive Order. The most recent report was released in December 2020.

Assembly Bill 32 (2006), California Global Warming Solutions Act

California's major initiative for reducing GHG emissions is AB 32, passed by the State legislature on August 31, 2006. This effort aims at reducing GHG emissions to 1990 levels by 2020. The CARB has established the level of GHG emissions in 1990 at 427 million metric tons (MMT) of CO_2e. The emissions target of 427 MMT requires the reduction of 169 MMT from the State's projected

business-as-usual 2020 emissions of 596 MMT. AB 32 requires the CARB to prepare a Scoping Plan that outlines the main State strategies for meeting the 2020 deadline and to reduce GHGs that contribute to global climate change. The Scoping Plan was approved by the CARB on December 11, 2008, and contains the main strategies California will implement to achieve the reduction of approximately 169 MMT CO_2e, or approximately 30 percent, from the State's projected 2020 emissions level of 596 MMT CO_2e under a business-as-usual scenario (this is a reduction of 42 MMT CO_2e, or almost 10 percent from 2002–2004 average emissions). The Scoping Plan also includes CARB-recommended GHG reductions for each emissions sector of the State's GHG inventory. The Scoping Plan calls for the largest reductions in GHG emissions to be achieved by implementing the following measures and standards:

- Improved emissions standards for light-duty vehicles (estimated reductions of 31.7 MMT CO_2e);
- The Low-Carbon Fuel Standard (15.0 MMT CO_2e);
- Energy efficiency measures in buildings and appliances and the widespread development of combined heat and power systems (26.3 MMT CO_2e); and
- A renewable portfolio standard for electricity production (21.3 MMT CO_2e).

The Scoping Plan identifies 18 emission reduction measures that address cap-and-trade programs, vehicle gas standards, energy efficiency, low carbon fuel standards, renewable energy, regional transportation-related GHG targets, vehicle efficiency measures, goods movement, solar roof programs, industrial emissions, high speed rail, green building strategies, recycling, sustainable forests, water, and air. The measures would result in a total reduction of 174 MMT CO_2e by 2020.

On August 24, 2011, the CARB unanimously approved both the new supplemental assessment and reapproved its Scoping Plan, which provides the overall roadmap and rule measures to carry out AB 32. The CARB also approved a more robust CEQA equivalent document supporting the supplemental analysis of the cap-and-trade program. The cap-and-trade took effect on January 1, 2012, with an enforceable compliance obligation that began January 1, 2013.

CARB has not yet determined what amount of GHG reductions it recommends from local government operations and local land use decisions; however, the Scoping Plan states that land use planning and urban growth decisions will play an important role in the State's GHG reductions because local governments have primary authority to plan, zone, approve, and permit how land is developed to accommodate population growth and the changing needs of their jurisdictions (meanwhile, CARB is also developing an additional protocol for community emissions). CARB further acknowledges that decisions on how land is used will have large impacts on the GHG emissions that will result from the transportation, housing, industry, forestry, water, agriculture, electricity, and natural gas emission sectors. The Scoping Plan states that the ultimate GHG reduction assignment to local government operations is to be determined. With regard to land use planning, the Scoping Plan expects an approximately 5.0 MMT CO_2e reduction due to implementation of SB 375.

In addition to reducing GHG emissions to 1990 levels by 2020, AB 32 directed the CARB and the CAT to identify a list of "discrete early action GHG reduction measures" that could be adopted and made

enforceable by January 1, 2010. On January 18, 2007, Governor Schwarzenegger signed EO S-1-07, further solidifying California's dedication to reducing GHGs by setting a new Low Carbon Fuel Standard (LCFS). This executive order sets a target to reduce the carbon intensity of California transportation fuels by at least 10 percent by 2020 and directs the CARB to consider the LCFS as a discrete early action measure. In 2011, U.S. District Court Judge Lawrence O'Neil issued an injunction preventing implementation of the LCFS, ruling that it is unconstitutional. In 2012, the Ninth Circuit Court of Appeal stayed the District Court's injunction, allowing implementation of the LCFS. The Ninth Circuit decided to uphold the LCFS.

In June 2007, the CARB approved a list of 37 early action measures, including three discrete early action measures (LCFS, Restrictions on GWP Refrigerants, and Landfill CH_4 Capture).[40] Discrete early action measures are measures that were required to be adopted as regulations and made effective no later than January 1, 2010, the date established by Health and Safety Code Section 38560.5. The CARB adopted additional early action measures in October 2007 that tripled the number of discrete early action measures. These measures relate to truck efficiency, port electrification, reduction of PFCs from the semiconductor industry, reduction of propellants in consumer products, proper tire inflation, and SF_6 reductions from the non-electricity sector. The combination of early action measures is estimated to reduce statewide GHG emissions by nearly 16 MMT.[41]

The CARB approved the First Update to the Climate Change Scoping Plan on May 22, 2014. The First Update identifies opportunities to leverage existing and new funds to further drive GHG emission reductions through strategic planning and targeted low carbon investments. The First Update defines CARB climate change priorities until 2020, and also sets the groundwork to reach long-term goals set forth in EOs S-3-05 and B-16-2012. The Update highlights California's progress toward meeting the "near-term" 2020 GHG emission reduction goals as defined in the initial Scoping Plan. It also evaluates how to align the State's "longer-term" GHG reduction strategies with other State policy priorities for water, waste, natural resources, clean energy, transportation, and land use. CARB released a second update to the Scoping Plan, the 2017 Scoping Plan,[42] to reflect the 2030 target set by EO B-30-15 and codified by SB 32.

CARB is currently working on an update to the 2017 Scoping Plan, which will be released this year. The 2022 Scoping Plan Update will assess progress towards achieving the SB 32 2030 target and lay out a path to achieve carbon neutrality no later than 2045.

Senate Bill 97 (2007)

SB 97, signed by the Governor in August 2007 (Chapter 185, Statutes of 2007; Public Resources Code [PRC], Sections 21083.05 and 21097), acknowledges climate change is a prominent environmental issue that requires analysis under CEQA. This bill directed the Governor's Office of Planning and

40 CARB. 2007. *Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California Recommended for Board Consideration*. October.

41 CARB. 2007. "ARB approves tripling of early action measures required under AB 32" News Release 07-46. October 25.

42 CARB. 2017. *California's 2017 Climate Change Scoping Plan*. November.

Research (OPR) to prepare, develop, and transmit to the California Resources Agency guidelines for mitigating GHG emissions or the effects of GHG emissions, as required by CEQA.

The California Natural Resources Agency adopted the amendments to the *State CEQA Guidelines* in November 2018, which went into effect in December 2018. The amendments do not identify a threshold of significance for GHG emissions, nor do they prescribe assessment methodologies or specific mitigation measures. The amendments encourage lead agencies to consider many factors in performing a CEQA analysis, but preserve the discretion granted by CEQA to lead agencies in making their own determinations based on substantial evidence. The amendments also encourage public agencies to make use of programmatic mitigation plans and programs when they perform individual project analyses.

Senate Bill 375 (2008)

SB 375, the Sustainable Communities and Climate Protection Act, which establishes mechanisms for the development of regional targets for reducing passenger vehicle GHG emissions, was adopted by the State on September 30, 2008. On September 23, 2010, the CARB adopted the vehicular GHG emissions reduction targets that had been developed in consultation with the Metropolitan Planning Organization (MPOs); the targets require a 6 to 15 percent reduction by 2020 and between 13 to 19 percent reduction by 2035 for each MPO. SB 375 recognizes the importance of achieving significant GHG reductions by working with cities and counties to change land use patterns and improve transportation alternatives. Through the SB 375 process, MPOs such as the Fresno Council of Governments will work with local jurisdictions in the development of Sustainable Communities Strategy (SCS) designed to integrate development patterns and the transportation network in a way that reduces GHG emissions while meeting housing needs and other regional planning objectives. Pursuant to SB 375, the Los Angeles/Southern California reduction targets for per capita vehicular emissions were 8 percent by 2020 and are 19 percent by 2035 as shown in Table E.

Table E: Senate Bill 375 Regional Greenhouse Gas Emissions Reduction Targets

Metropolitan Planning Organization	By 2020 (percent)	By 2035 (percent)
San Francisco Bay Area	10	19
San Diego	15	19
Sacramento	7	19
Central Valley/San Joaquin	6-13	13-16
Los Angeles/Southern California	8	19

Source: California Air Resources Board (2018).

Executive Order B-30-15 (2015)

Governor Jerry Brown signed EO B-30-15 on April 29, 2015, which added the immediate target of:

- GHG emissions should be reduced to 40 percent below 1990 levels by 2030.

All State agencies with jurisdiction over sources of GHG emissions were directed to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 targets. CARB was

directed to update the AB 32 Scoping Plan to reflect the 2030 target, and therefore, is moving forward with the update process. The mid-term target is critical to help frame the suite of policy measures, regulations, planning efforts, and investments in clean technologies and infrastructure needed to continue reducing emissions.

Senate Bill 350 (2015) Clean Energy and Pollution Reduction Act

SB 350, signed by Governor Jerry Brown on October 7, 2015, updates and enhances AB 32 by introducing the following set of objectives in clean energy, clean air, and pollution reduction for 2030:

- Raise California's renewable portfolio standard from 33 percent to 50 percent; and
- Increasing energy efficiency in buildings by 50 percent by the year 2030.

The 50 percent renewable energy standard will be implemented by the CPUC for the private utilities and by the CEC for municipal utilities. Each utility must submit a procurement plan showing it will purchase clean energy to displace other non-renewable resources. The 50 percent increase in energy efficiency in buildings must be achieved through the use of existing energy efficiency retrofit funding and regulatory tools already available to state energy agencies under existing law. The addition made by this legislation requires state energy agencies to plan for, and implement those programs in a manner that achieves the energy efficiency target.

Senate Bill 32, California Global Warming Solutions Act of 2016, and Assembly Bill 197

In summer 2016 the Legislature passed, and the Governor signed, SB 32, and AB 197. SB 32 affirms the importance of addressing climate change by codifying into statute the GHG emissions reductions target of at least 40 percent below 1990 levels by 2030 contained in Governor Brown's April 2015 EO B-30-15. SB 32 builds on AB 32 and keeps us on the path toward achieving the State's 2050 objective of reducing emissions to 80 percent below 1990 levels, consistent with an IPCC analysis of the emissions trajectory that would stabilize atmospheric GHG concentrations at 450 parts per million CO_2e and reduce the likelihood of catastrophic impacts from climate change.

The companion bill to SB 32, AB 197, provides additional direction to CARB related to the adoption of strategies to reduce GHG emissions. Additional direction in AB 197 meant to provide easier public access to air emissions data that are collected by CARB was posted in December 2016.

Senate Bill 100

On September 10, 2018, Governor Brown signed SB 100, which raises California's Renewables Portfolio Standard (RPS) requirements to 60 percent by 2030, with interim targets, and 100 percent by 2045. The bill also establishes a state policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all State agencies by December 31, 2045. Under the bill, the State cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

Executive Order B-55-18

EO B-55-18, signed September 10, 2018, sets a goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." EO B-55-18 directs CARB to work with relevant state agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal. The goal of carbon neutrality by 2045 is in addition to other statewide goals, meaning not only should emissions be reduced to 80 percent below 1990 levels by 2050, but that, by no later than 2045, the remaining emissions be offset by equivalent net removals of CO_2e from the atmosphere, including through sequestration in forests, soils, and other natural landscapes.

Title 24, Part 11, Building Standards Code and CALGreen Code

In November 2008, the California Building Standards Commission established the California Green Building Standards Code (CALGreen Code), which sets performance standards for residential and non-residential development to reduce environmental impacts and encourage sustainable construction practices. The CALGreen Code addresses energy efficiency, water conservation, material conservation, planning and design, and overall environmental quality. The CALGreen Code is updated every 3 years and was most recently updated in 2019 to include new mandatory measures for residential as well as non-residential uses; the new measures took effect on January 1, 2020. The next set of standards will be adopted in 2022 and apply to projects seeking building permits on or after January 1, 2023.

California Building Efficiency Standards (Title 24, Part 6)

The California Building Standards Code, or Title 24 of the California Code of Regulations (CCR) contains the regulations that govern the construction of buildings in California. Within the Building Standards Code, two parts pertain to the incorporation of both energy efficient and green building elements into land use development. Part 6 is California's Energy Efficiency Standards for Residential and Non-Residential Buildings. These standards were first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption and are updated on an approximately 3-year cycle to allow consideration and possible incorporation of new energy efficient technologies and methods. All buildings for which an application for a building permit is submitted on or after January 1, 2020, must follow the 2019 standards. The next set of standards is anticipated for release in 2022. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions.

Cap and Trade

The development of a cap-and-trade program was included as a key reduction measure of the CARB AB 32 Climate Change Scoping Plan. The cap-and-trade program will help put California on the path to meet its goal of reducing GHG emissions to 1990 levels by 2020 and ultimately achieving an 80 percent reduction from 1990 levels by 2050. The cap-and-trade emissions trading program developed by the CARB took effect on January 1, 2012, with enforceable compliance obligations beginning January 1, 2013. The cap-and-trade program aims to regulate GHG emissions from the largest producers in the State by setting a statewide firm limit, or cap, on allowable annual GHG emissions. The cap was set in 2013 at approximately 2 percent below the emissions forecast for 2020. In 2014, the cap declined approximately 2 percent. Beginning in 2015 and continuing through

2020, the cap has been declining approximately 3 percent annually. The CARB administered the first auction on November 14, 2012, with many of the qualified bidders representing corporations or organizations that produce large amounts of GHG emissions, including energy companies, agriculture and food industries, steel mills, cement companies, and universities. On January 1, 2015, compliance obligation began for distributors of transportation fuels, natural gas, and other fuels. The cap-and-trade program was initially slated to sunset in 2020 but the passage of SB 398 in 2017 extended the program through 2030.

Executive Order N-79-20

EO N-79-20, which was signed by the Governor on September 23, 2020, sets the following goals for the State: 100 percent of in-state sales of new passenger cars and trucks shall be zero-emission by 2035; 100 percent of medium- and heavy-duty vehicles in the State shall be zero-emission by 2045 for all operations where feasible and by 2035 for drayage trucks; and 100 percent of off-road vehicles and equipment in the State shall be zero-emission by 2035, where feasible.

California Integrated Waste Management Act

To minimize the amount of solid waste that must be disposed of in landfills, the State Legislature passed the California Integrated Waste Management Act of 1989 (AB 939), effective January 1990. According to AB 939, all cities and counties were required to divert 25 percent of all solid waste from landfill facilities by January 1, 1995, and 50 percent by January 1, 2000. Through other statutes and regulations, this 50 percent diversion rate also applies to State agencies. In order of priority, waste reduction efforts must promote source reduction, recycling and composting, and environmentally safe transformation and land disposal. In 2011, AB 341 modified the California Integrated Waste Management Act and directed the California Department of Resources Recycling and Recovery (CalRecycle) to develop and adopt regulations for mandatory commercial recycling. The resulting 2012 Mandatory Commercial Recycling Regulation requires that on and after July 1, 2012, certain businesses that generate four cubic yards or more of commercial solid waste per week shall arrange recycling services. To comply with this requirement, businesses may either separate recyclables and self-haul them or subscribe to a recycling service that includes mixed waste processing. AB 341 also established a statewide recycling goal of 75 percent; the 50 percent disposal reduction mandate still applies for cities and counties under AB 939, the Integrated Waste Management Act. In April 2016, AB 1826 further modified the California Integrated Waste Management Act, requiring businesses that generate a specified amount of organic waste per week to arrange for recycling services for that organic waste in a specified manner. If CalRecycle determines that statewide disposal of organic waste has not been reduced by 50 percent below 2014 levels by 2020, businesses generating more than two cubic yards of organic waste per week would be subject to these waste collection requirements. CalRecycle plans to make this assessment in the fall of 2020. Diverting organic waste from landfills reduces emissions of CH_4. This is equivalent to reducing anaerobic decomposition of organic waste that would have otherwise occurred in landfills where organic waste is often buried with other inorganic waste.

Low Carbon Fuel Standard

In January 2007, EO S-01-07 established an LCFS. This executive order calls for a statewide goal to be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent

by 2020, and that an LCFS for transportation fuels be established for California. The LCFS applies to all refiners, blenders, producers, or importers ("Providers") of transportation fuels in California, including fuels used by off-road construction equipment. In June 2007, CARB adopted the LCFS under AB 32 pursuant to Health and Safety Code Section 38560.5, and, in April 2009, CARB approved the new rules and carbon intensity reference values with new regulatory requirements taking effect in January 2011. The standards require providers of transportation fuels to report on the mix of fuels they provide and demonstrate they meet the LCFS intensity standards annually. This is accomplished by ensuring that the number of "credits" earned by providing fuels with a lower carbon intensity than the established baseline (or obtained from another party) is equal to or greater than the "deficits" earned from selling higher intensity fuels. In response to certain court rulings, CARB re-adopted the LCFS regulation in September 2015, and the LCFS went into effect on January 1, 2016. In 2018, CARB approved amendments to the regulation to readjust carbon intensity benchmarks to meet California's 2030 GHG reductions targets under SB 32. These amendments include opportunities to promote zero emission vehicle (ZEV) adoption, carbon capture and sequestration, and advanced technologies for decarbonization of the transportation sector.

Advanced Clean Cars Program

In January 2012, CARB approved the Advanced Clean Cars program, which combines the control of GHG emissions and criteria air pollutants, as well as requirements for greater numbers of ZEVs, into a single package of regulatory standards for vehicle model years 2017 through 2025. The new regulations strengthen the GHG standard for 2017 models and beyond. This will be achieved through existing technologies, the use of stronger and lighter materials, and more efficient drivetrains and engines. The program's ZEVs regulation requires battery, fuel cell, and/or plug-in hybrid electric vehicles to account for up to 15 percent of California's new vehicle sales by 2025. The program also includes a clean fuels outlet regulation designed to support the commercialization of zero-emission hydrogen fuel cell vehicles planned by vehicle manufacturers by 2015 by requiring increased numbers of hydrogen fueling stations throughout the State. The number of stations will grow as vehicle manufacturers sell more fuel cell vehicles. By 2025, when the rules will be fully implemented, the statewide fleet of new cars and light trucks will emit 40 percent fewer GHGs and 75 percent fewer smog-forming emissions than 2012 model year vehicles.

Executive Order B-48-18

In January 2018, Governor Brown signed EO B-48-18 requiring all State entities to work with the private sector to have at least 5 million ZEVs on the road by 2030, as well as install 200 hydrogen fueling stations and 250,000 electric vehicle charging stations by 2025. It specifies that 10,000 of the electric vehicle charging stations should be direct current fast chargers. This order also requires all State entities to continue to partner with local and regional governments to streamline the installation of ZEV infrastructure. The Governor's Office of Business and Economic Development is required to publish a Plug-in Charging Station Design Guidebook and update the 2015 Hydrogen Station Permitting Guidebook to aid in these efforts. All State entities are required to participate in updating the 2016 Zero-Emissions Vehicle Action Plan to help expand private investment in ZEV infrastructure with a focus on serving low-income and disadvantaged communities. Additionally, all State entities are to support and recommend policies and actions to expand ZEV infrastructure at

residential land uses, through the LCFS Program, and recommend how to ensure affordability and accessibility for all drivers.

Regional Regulations

South Coast Air Quality Management District

In 2008, the SCAQMD formed a Working Group to identify GHG emissions thresholds for land use projects that could be used by local lead agencies in the Basin. The Working Group developed several different options that are contained in the SCAQMD 2008 draft guidance document titled Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans[43] that could be applied by lead agencies. On September 28, 2010, SCAQMD Working Group Meeting No. 15 provided further guidance, including a tiered approach for evaluating GHG emissions for development projects where the SCAQMD is not the lead agency. The SCAQMD has not presented a finalized version of these thresholds to the governing board.

The SCAQMD identifies the emissions level for which a project would not be expected to substantially conflict with any State legislation adopted to reduce statewide GHG emissions. As such, the utilization of a service population represents the rates of emissions needed to achieve a fair share of the State's mandated emissions reductions. Overall, the SCAQMD identifies a GHG efficiency level that, when applied statewide or to a defined geographic area, would meet the year 2020 and post-2020 emissions targets as required by AB 32 and SB 32. If projects are able to achieve targeted rates of emissions per the service population, the State will be able to accommodate expected population growth and achieve economic development objectives, while also abiding by AB 32's emissions target and future post-2020 targets.

Southern California Association of Governments

On September 3, 2020, SCAG adopted Connect SoCal–The 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy (2020–2045 RTP/SCS).[44] In general, the SCS outlines a development pattern for the region, which, when integrated with the transportation network and other transportation measures and policies, would reduce vehicle miles traveled (VMT) from automobiles and light-duty trucks and thereby reduce GHG emissions from these sources. For the SCAG region, CARB has set GHG reduction targets at 8 percent below 2005 per capita emissions levels by 2020, and 19 percent below 2005 per capita emissions levels by 2035. The RTP/SCS lays out a strategy for the region to meet these targets. Overall, the SCS is meant to provide growth strategies that will achieve the regional GHG emissions reduction targets. Land use strategies to achieve the region's targets include planning for new growth around high-quality transit areas and livable corridors, and creating neighborhood mobility areas to integrate land use and transportation

43 SCAQMD. 2008. Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans.

44 Southern California Association of Governments (SCAG). 2020. Connect SoCal: The 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy of the Southern California Association of Governments. Website: https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal-plan_0.pdf?1606001176 (accessed November 2021).

and plan for more active lifestyles.[45] However, the SCS does not require that local General Plans, Specific Plans, or zoning be consistent with the SCS; SCAG is required to consider local land use controls when drafting the SCS.

Local Regulations

The City of Santa Fe Springs has not yet adopted a Greenhouse Gas Reduction Plan or Climate Action Plan. However, the 2040 General Plan includes goals, policies, and implementing actions that work to reduce GHG emissions and global climate change. The following policies from the General Plan would be applicable to the proposed project.

- **Policy LU-3.8: Green Industrial Operations.** Encourage industrial businesses to utilize green building strategies, green vehicle fleets, energy-efficient equipment, and support renewable energy systems.

- **Policy C-12.9: Water Conservation**. Promote cost-effective conservation strategies and programs that increase water use efficiency.

- **Policy S-5.4: Resilient Building Approaches.** Support building and site improvements that reduce energy and water use and urban heat island effects.

- **Policy S-5.7: Passive Solar Design.** Encourage passive solar design for new development and community facilities, including cool roofs, architectural features that cool interiors, shade shelter areas, shaded playgrounds, and bus shelters canopies.

- **Policy COS-5.4: Green Buffers.** Expand trees and landscaping to build an extensive green buffer between residential neighborhoods and freeways, rail corridors, and industrial districts to help reduce air pollution impacts. Prioritize residential neighborhoods that are designated as disadvantaged communities.

- **Policy COS-5.5: Environmental Benefits.** Expand urban greening to reduce air and noise pollution, reduce and clean urban runoff, increase groundwater recharge, improve ecological diversity, and help cool neighborhoods by minimizing heat island effects.

- **Policy COS-10.1: Waste Recycle.** Identify industries and businesses that recycle waste materials for productive reuse, and develop a strategy to bring those businesses to the city as part of a "green" business development strategy.

[45] SCAG. 2020. Connect SoCal: The 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy of the Southern California Association of Governments. Website: https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal-plan_0.pdf?1606001176 (accessed December 2021).

SETTING

This section provides the current SCAQMD attainment status, climate and air quality, ambient air quality monitoring results, and GHG emissions inventory.

ATTAINMENT STATUS

The CARB is required to designate areas of the state as attainment, nonattainment, or unclassified for all State standards. An *attainment* designation for an area signifies that pollutant concentrations did not violate the standard for that pollutant in that area. A *nonattainment* designation indicates that a pollutant concentration violated the standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria. An *unclassified* designation signifies that data do not support either an attainment or nonattainment status. The CCAA divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category.

The USEPA designates areas for O_3, CO, and NO_2 as either does not meet the primary standards, or cannot be classified, or better than national standards. For SO_2, areas are designated as does not meet the primary standards, does not meet the secondary standards, cannot be classified, or better than national standards.

Table F provides a summary of the attainment status for the Basin with respect to NAAQS and CAAQS.

Table F: Attainment Status of Criteria Pollutants in the South Coast Air Basin

Pollutant	State	Federal
O_3 1 hour	Nonattainment	Extreme Nonattainment
O_3 8 hour	Nonattainment	Extreme Nonattainment
PM_{10}	Nonattainment	Attainment/Maintenance
$PM_{2.5}$	Nonattainment	Serious Nonattainment
CO	Attainment	Attainment/Maintenance
NO_2	Attainment	Attainment/Maintenance
SO_2	N/A	Attainment/Unclassified
Lead	Attainment	Attainment[1]
All others	Attainment/Unclassified	Attainment/Unclassified

Source: South Coast Air Quality Management District (2018).
Notes:
[1] Except in Los Angeles County.
CO = carbon monoxide
N/A = not applicable
NO_2 = nitrogen dioxide
O_3 = ozone
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
SO_2 = sulfur dioxide

EXISTING CLIMATE AND AIR QUALITY

Air quality in the planning area is not only affected by various emission sources (e.g., mobile and industry), but also by atmospheric conditions (e.g., wind speed, wind direction, temperature, and

rainfall). The combination of topography, low mixing height, abundant sunshine, and emissions from the second-largest urban area in the United States gives the Basin some of the worst air pollution in the nation.

The annual average temperature varies little throughout the Basin, ranging from the low to middle 60s°F. With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. The climatological station closest to the site is the Los Angeles Downtown USC Campus[46] The monthly average maximum temperature recorded at this station ranged from 66.4°F in January to 93.1°F in August, with an annual average maximum of 74.0°F. The monthly average minimum temperature recorded at this station ranged from 48.3°F in January to 63.8°F in August, with an annual average minimum of 55.8°F. These levels are representative of the project area.

The majority of annual rainfall in the Basin occurs between November and March. Summer rainfall is minimal and is generally limited to scattered thundershowers in coastal regions and slightly heavier showers in the eastern portion of the Basin and along the coastal side of the mountains. Average monthly rainfall at the Los Angeles Downtown USC Campus station varied from 0.01 inches in July to 3.38 inches in February, with an annual total of 14.77 inches. Patterns in monthly and yearly rainfall totals are unpredictable due to fluctuations in the weather.

The Basin experiences a persistent temperature inversion (increasing temperature with increasing altitude) as a result of the Pacific high. This inversion limits the vertical dispersion of air contaminants, holding them relatively near the ground. As the sun warms the ground and the lower air layer, the temperature of the lower air layer approaches the temperature of the base of the inversion (upper) layer until the inversion layer finally breaks, allowing vertical mixing with the lower layer. This phenomenon is observed in mid-afternoon to late afternoon on hot summer days, when the air appears to clear up suddenly. Winter inversions frequently break by midmorning.

Winds in the project area blow predominantly from the south-southwest, with relatively low velocities. Wind speeds in the project area average about 5 miles per hour (mph). Summer wind speeds average slightly higher than winter wind speeds. Low average wind speeds, together with a persistent temperature inversion, limit the vertical dispersion of air pollutants throughout the Basin. Strong, dry, north or northeasterly winds, known as Santa Ana winds, occur during the fall and winter months, dispersing air contaminants. The Santa Ana conditions tend to last for several days at a time.

The combination of stagnant wind conditions and low inversions produces the greatest pollutant concentrations. On days of no inversion or high wind speeds, ambient air pollutant concentrations are the lowest. During periods of low inversions and low wind speeds, air pollutants generated in urbanized areas are transported predominantly on shore into Riverside and San Bernardino Counties. In the winter, the greatest pollution problems are CO and NO_X because of extremely low inversions and air stagnation during the night and early morning hours. In the summer, the longer daylight hours and brighter sunshine combine to cause a reaction between hydrocarbons and NO_x to form photochemical smog. Smog is a general term that is naturally occurring fog that has become

[46] Western Regional Climate Center. Recent Climate in the West. Website: http://www.wrcc.dri.edu, (accessed May 2022).

mixed with smoke or pollution. In this context it is better described as a form of air pollution produced by the photochemical reaction of sunlight with pollutants that have been released into the atmosphere, especially by automotive emissions.

AIR QUALITY MONITORING RESULTS

Air quality monitoring stations are located throughout the nation and are maintained by the local air pollution control district and State air quality regulating agencies. The SCAQMD, together with the CARB, maintains ambient air quality monitoring stations in the Basin. The air quality monitoring stations closest to the project site located at 700 N. Bullis Road in the City of Compton and 1630 N. Main St, Los Angeles.

Pollutant monitoring results for years 2019 to 2021 at the Compton ambient air quality monitoring stations are shown in Table G. As indicated in the monitoring results, the federal PM_{10} standard had no exceedances for the 3-year period. The State PM_{10} standard had an unknown number of exceedances in the 3-year period. $PM_{2.5}$ levels exceeded the federal standard one time in 2019, three times in 2020, and an unknown number of times in 2021. State 1-hour O_3 standards were exceeded once in 2019, 3 times in 2020, and had no exceedances in 2021. In addition, both the Federal and State 8-hour O_3 standards were not exceeded in the area during the 3-year period. The CO, SO_2, and NO_2 standards were not exceeded in this area during the 3-year period.

GREENHOUSE GAS EMISSIONS INVENTORY

An emissions inventory that identifies and quantifies the primary human-generated sources and sinks of GHGs is a well-recognized and useful tool for addressing climate change. This section summarizes the latest information on global, United States, and California GHG emission inventories.

Global Emissions

Worldwide emissions of GHGs in 2018 totaled 25.6 billion metric tons of CO_2e. Global estimates are based on country inventories developed as part of the programs of the United Nations Framework Convention on Climate Change.[47]

United States Emissions

In 2019, the year for which the most recent data are available, the United States emitted about 6,558 million metric tons of CO_2e (MMT CO_2e). Overall, emissions in 2019 decreased by 1.7 percent since 2018 and were 13 percent 2005 levels. This decrease was driven largely by a decrease in emissions from fossil fuel combustion resulting from a decrease in total energy use in 2019 compared to 2018 and a continued shift from coal to natural gas and renewables in the electric power sector. Of the six major sectors – residential, commercial, agricultural, industry, transportation, and electricity generation – transportation accounted for the highest amount of

[47] United Nations Framework Convention on Climate Change (UNFCCC). 2021. GHG Data from UNFCCC. Website: unfccc.int/process-and-meetings/transparency-and-reporting/greenhouse-gas-data/ghg-data-unfccc/ghg-data-from-unfccc (accessed April 2022).

Table G: Ambient Air Quality at Nearby Monitoring Stations

Pollutant	Standard	2019	2020	2021
Carbon Monoxide (CO)[1]				
Maximum 1-hour concentration (ppm)		3.8	4.5	4.3
Number of days exceeded:	State: > 20 ppm	0	0	0
	Federal: > 35 ppm	0	0	0
Maximum 8-hour concentration (ppm)		3.2	3.1	3.7
Number of days exceeded:	State: > 9 ppm	0	0	0
	Federal: > 9 ppm	0	0	0
Ozone (O_3)				
Maximum 1-hour concentration (ppm)		0.100	0.152	0.085
Number of days exceeded:	State: > 0.09 ppm	1	3	0
Maximum 8-hour concentration (ppm)		0.079	0.115	0.076
Number of days exceeded:	State: > 0.07 ppm	1	4	ND
	Federal: > 0.07 ppm	1	4	1
Coarse Particulates (PM_{10})				
Maximum 24-hour concentration (µg/m^3)		62	83	64
Number of days exceeded:	State: > 50 µg/m^3	ND	ND	ND
	Federal: > 150 µg/m^3	0	0	0
Annual arithmetic average concentration (µg/m^3)		ND	ND	ND
Exceeded for the year:	State: > 20 µg/m^3	ND	ND	ND
	Federal: > 50 µg/m^3	ND	ND	ND
Fine Particulates ($PM_{2.5}$)[2]				
Maximum 24-hour concentration (µg/m^3)		39.5	67.5	102.1
Number of days exceeded:	Federal: > 35 µg/m^3	1	19	ND
Annual arithmetic average concentration (µg/m^3)		10.9	14.7	13.4
Exceeded for the year:	State: > 12 µg/m^3	No	Yes	Yes
	Federal: > 15 µg/m^3	No	No	No
Nitrogen Dioxide (NO_2)				
Maximum 1-hour concentration (ppm)		0.07	0.072	0.068
Number of days exceeded:	State: > 0.250 ppm	0	0	0
Annual arithmetic average concentration (ppm)		0.014	0.014	0.014
Exceeded for the year:	Federal: > 0.053 ppm	No	No	No
Sulfur Dioxide (SO_2)				
Maximum 1-hour concentration (ppm)		0.01	0.0038	0.002
Number of days exceeded:	State: > 0.25 ppm	0	0	0
Maximum 24-hour concentration (ppm)		0.0014	0.0009	0.0012
Number of days exceeded:	State: > 0.04 ppm	0	0	0
	Federal: > 0.14 ppm	0	0	0
Annual arithmetic average concentration (ppm)		0.0003	0.00023	0.0004
Exceeded for the year:	Federal: > 0.030 ppm	No	No	No

Sources: CARB (2021) and USEPA (2022).

[1] Data were taken from the 1630 N. Main St, Los Angeles monitoring station.

[2] Data were taken from the 700 N. Bullis Road, Compton monitoring station.

µg/m^3 = micrograms per cubic meter

CARB = California Air Resources Board

ND = No data. There were insufficient (or no) data to determine the value.

ppm = parts per million

USEPA = United States Environmental Protection Agency

GHG emissions in 2019 (approximately 29 percent), with electricity generation second at 25 percent and emissions from industry third at 23 percent.[48]

State of California Emissions

The State emitted approximately 418.2 MMT CO_2e emissions in 2019, 7.2 MMT CO_2e lower than 2018 levels and almost 13 MMT CO_2e below the 2020 GHG Limit of 431 MMT CO_2e.[49] The CARB estimates that transportation was the source of approximately 40 percent of the State's GHG emissions in 2019, followed by industrial sources at approximately 21 percent and electricity generation at 14 percent. The remaining sources of GHG emissions were agriculture at 8 percent, residential activities at 7 percent, commercial activities at 4 percent, high GWP at 5 percent, and waste at 2 percent.[50]

48 USEPA. 2021. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2019. Website: https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2019 (accessed April 2022).

49 CARB. 2021. *California Greenhouse Gas Emissions for 2000 to 2019, Trends of Emissions and Other Indicators Report*. Website: https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2019/ghg_inventory_trends_00-19.pdf (accessed April 2022).

50 Ibid.

METHODOLOGY

The methodology used to estimate air quality, health risk, GHG, and energy impacts is described below.

CONSTRUCTION EMISSIONS

Construction activities can generate a substantial amount of air pollution. Construction activities are considered temporary; however, short-term impacts can contribute to exceedances of air quality standards. Construction activities include demolition, site preparation, earthmoving, and general construction. The emissions generated from these common construction activities include fugitive dust from soil disturbance, fuel combustion from mobile heavy-duty diesel and gasoline powered equipment, portable auxiliary equipment, and worker commute trips.

The California Emissions Estimator Model version 2020.4.0 (CalEEMod) computer program was used to calculate emissions from on-site construction equipment and emissions from worker and vehicle trips to the site. This analysis assumes that construction would begin the first quarter of 2023 and occur for approximately 9 months. The proposed project would include the demolition of an existing 67,540 sf building, which was included in this analysis. This analysis also assumes the use of Tier 2 construction equipment and that the proposed project would comply with SCAQMD Rule 403 measures. All other construction details are not yet known; therefore, default assumptions (e.g., construction worker and truck trips and fleet activities) from CalEEMod were used.

OPERATIONAL EMISSIONS

The air quality analysis includes estimating emissions associated with long-term operation of the proposed project. Consistent with the SCAQMD guidance for estimating emissions associated with land use development projects, the CalEEMod computer program was used to calculate the long-term operational emissions associated with the project. As discussed in the Project Description section, the proposed project would develop a 185,294 sf warehouse building with a two-story office space, as well as associated parking, landscaping, and infrastructure improvements.[51] The proposed project analysis was conducted assuming that 10 percent of building square footage would be refrigerated warehouse and the remaining 90 percent would be unrefrigerated warehouse. The analysis was conducted using land use codes *Unrefrigerated Warehouse-No Rail*, *Refrigerated Warehouse-No Rail*, *City Park*, and *Parking Lot.* Trip generation rates used in CalEEMod for the project were based on the project's *Trip Generation and VMT Screening Analysis,* [52] which identifies that the proposed project would generate a total of approximately 318 average daily trips,

[51] Following completion of this air quality, heath risk, energy, and GHG impact report, the proposed project was refined that the square footage reduced from 185,733 sf to 185,294 sf. While a 185,733 sf building was analyzed in this report, the smaller square footage was reviewed by LSA and it was determined that the smaller project would not result in any new or more severe air quality, HRA energy, GHG impacts than what is described herein.

[52] Environment Planning Development Solutions, Inc., 2022. *Trip Generation and VMT Screening Analysis for 12300 Lakeland Warehouse*. May 12.

including 225 passenger vehicle trips, 18 two-axle truck trips, 18 three-axle truck trips, and 57 four-axle truck trips.

OPERATIONAL HEALTH RISK ASSESSMENT

To determine the potential health risk to people living and working near the proposed project associated with the exhaust of diesel-powered trucks and equipment, an operational Health Risk Assessment (HRA) was conducted for the proposed project. This HRA has been conducted using three models: (1) EMFAC2021 for on-road vehicle emissions factors and percentages of fuel type within the overall vehicle fleet; (2) the USEPA AERMOD air dispersion model to determine how the TACs would move through the atmosphere after release from sources both on site and on surrounding roadways; and (3) CARB's HARP2 model to translate the pollutant concentrations from AERMOD into individual health risks at any sensitive receptor locations surrounding the project site.

The first step of an HRA is to characterize the project-related emissions of TACs. The proposed project would generate approximately 318 average daily trips, including 225 passenger vehicle trips, 18 two-axle truck trips, 18 three-axle truck trips, and 57 four-axle truck trips. The trucks would access the site by Lakeland Road, Norwalk Boulevard, and Getty Drive. The proposed project would provide 24 dock-high doors; as the project would contain multiple loading docks, offsite queuing of trucks is not anticipated. While the TAC emissions from gasoline-powered vehicles have a small health effect compared to diesel particulate matter (DPM), this HRA includes both gasoline- and diesel-powered vehicle emissions. For the diesel exhaust emissions, it is sufficient to only consider the DPM (PM_{10} and $PM_{2.5}$) portions of the exhaust; all the TACs for the gasoline exhaust emissions are contained in the ROG emissions. Using speciation data from CARB, the emission rates of the TAC components are derived from the total ROG emissions. These data are attached.

Project trucks would operate in two modes: stationary idling and moving on and off the site. The emissions from trucks while idling result in a much higher concentration of TACs at nearby sensitive receptors compared to the emissions from moving trucks. This is due to the dispersion of emissions that occurs with distance and with travel of the vehicle. For this HRA, the truck travel emissions were modeled as a series of volume sources along the on-site driveway, along Getty Drive going west, Norwalk Boulevard going East, and Lakeland Road going North and South. LSA assumed vehicles traveling on site would maneuver slowly, averaging approximately 5–15 miles per hour (mph), and that vehicles traveling on roadways would average 5–55 mph.

The idling emissions of trucks operating on the project site were modeled as point sources within the area sources representing the planned loading docks. EMFAC2021 was used to determine the emissions factors of idling and operating diesel trucks to determine the total emissions of DPM. While it is expected that the truck emissions rate will continue to reduce over time, an HRA only allows for a single emission rate to represent the entire 30-year exposure period. The use of emissions factors for the year 2022, was used as a conservative estimate of emissions, although, the project is not expected to be fully operational until 2024.

ENERGY USE

The analysis of electricity/natural gas usage is based on the CalEEMod modeling, which quantifies energy use for project operations. Fuel consumption (diesel fuel and gasoline) from vehicle trips during operation was estimated for the opening year (2024) of the proposed project based on trip estimates from the CalEEMod model and fuel efficiencies from the CARB's EMFAC2021 model. Estimates of fuel consumption (diesel fuel and gasoline) from construction trucks and construction worker vehicles were based on trip estimates from the CalEEMod model and fuel efficiencies from the CARB EMFAC2021 model.

The analysis focuses on the four sources of energy that are relevant to the proposed project: electricity, natural gas, project construction equipment fuel, and vehicle fuel necessary for project operations. For the purposes of this analysis, the amount of electricity, natural gas, construction fuel, and fuel use from operations are quantified and compared to that consumed in Los Angeles County. The electricity/natural gas use of the proposed project is analyzed as a whole on an annual basis.

GREENHOUSE GAS ANALYSIS

Recognizing that the field of global climate change analysis is rapidly evolving, the approaches advocated most recently indicate that for determining a project's contribution to GHG emissions, lead agencies should calculate, or estimate, emissions from vehicular traffic, energy consumption, water conveyance and treatment, waste generation, construction activities, and any other significant source of emissions within the project area. The CalEEMod results were used to quantify GHG emissions generated by the project.

THRESHOLDS OF SIGNIFICANCE

The *State CEQA Guidelines* indicate that a project would normally have a significant adverse air quality impact if project-generated pollutant emissions would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project is nonattainment under applicable federal or state ambient air quality standards;
- Expose sensitive receptors to substantial pollutant concentrations; or
- Result in other emissions (such as those leading to odors) affecting a substantial number of people.

The *State CEQA Guidelines* indicate that a project would normally have a significant adverse energy impact if the project would:

- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.
- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

The *State CEQA Guidelines* indicate that a project would normally have a significant adverse greenhouse gas emission impact if the project would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reduction the emissions of greenhouse gases.

Certain air districts (e.g., SCAQMD) have created guidelines and requirements to conduct air quality analysis. The SCAQMD's current guidelines, the CEQA Air Quality Handbook with associated updates, were followed in this assessment of air quality and GHG impacts for the proposed project.

CRITERIA POLLUANT THRESHOLDS

SCAQMD has established daily emissions thresholds for construction and operation of a proposed project in the Basin. The emissions thresholds were established based on the attainment status of the Basin with regard to air quality standards for specific criteria pollutants. Because the concentration standards were set at a level that protects public health with an adequate margin of safety, these emissions thresholds are regarded as conservative and would overstate an individual project's contribution to health risks.

Table H lists the CEQA significance thresholds for construction and operational emissions established for the Basin. Projects in the Basin with construction- or operation-related emissions that exceed any of their respective emission thresholds would be considered significant under SCAQMD guidelines. These thresholds, which SCAQMD developed and that apply throughout the Basin, apply as both project and cumulative thresholds. If a project exceeds these standards, it is considered to have a project-specific and cumulative impact.

Table H: Regional Thresholds for Construction and Operational Emissions

Emissions Source	Pollutant Emissions Threshold (lbs/day)					
	VOC	NO_x	CO	PM_{10}	$PM_{2.5}$	SO_x
Construction	75	100	550	150	55	150
Operations	55	55	550	150	55	150

Source: SCAQMD. Air Quality Significance Thresholds. Website: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf (accessed December 2021).

CO = carbon monoxide
lbs/day = pounds per day
NO_x = nitrogen oxides
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides
VOC = volatile organic compounds

HEALTH RISK THRESHOLDS

The following limits for maximum individual cancer risk (MICR) and noncancer acute and chronic Hazard Index (HI) from project emissions of TACs are considered appropriate for use in determining the health risk for projects in the Basin:

- **MICR:** MICR is the estimated probability of a maximally exposed individual (MEI) contracting cancer as a result of exposure to TACs over a period of 30 years for adults and 9 years for children in residential locations and over a period of 25 years for workers. The MICR calculations include multipathway consideration, when applicable.

  The cumulative increase in MICR that is the sum of the calculated MICR values for all TACs would be considered significant if it would result in an increased MICR greater than 10 in 1 million (1×10^{-5}) at any receptor location.

- **Chronic HI:** Chronic HI is the ratio of the estimated long-term level of exposure to a TAC for a potential MEI to its chronic reference exposure level. The chronic HI calculations include multipathway consideration, when applicable.

  The project would be considered significant if the cumulative increase in total chronic HI for any target organ system would exceed 1.0 at any receptor location.

- **Acute HI:** Acute HI is the ratio of the estimated maximum 1-hour concentration of a TAC for a potential MEI to its acute reference exposure level.

  The project would be considered significant if the cumulative increase in total acute HI for any target organ system would exceed 1.0 at any receptor location.

The SCAQMD *CEQA Air Quality Handbook*[53] states that emissions of TACs are considered significant if an HRA shows an increased risk of greater than 10 in 1 million. Based on guidance from SCAQMD in the document *Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis*[54], for the purposes of this analysis, the threshold of 10 in 1 million was used as the cancer risk threshold for the proposed project.

LOCAL MICROSCALE CONCENTRATION STANDARDS

The significance of localized project impacts under CEQA depends on whether ambient CO levels in the vicinity of the project are above or below State and federal CO standards. Because ambient CO levels are below the standards throughout the Basin, a project would be considered to have a significant CO impact if project emissions result in an exceedance of one or more of the 1-hour or 8-hour standards. The following are applicable local emission concentration standards for CO:

- California State 1-hour CO standard of 20 parts per million (ppm)
- California State 8-hour CO standard of 9 ppm

GLOBAL CLIMATE CHANGE

To provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents, SCAQMD convened a GHG CEQA Significance Threshold Working Group (Working Group). Based on the last Working Group meeting held in September 2010 (Meeting No. 15), SCAQMD proposed to adopt a tiered approach for evaluating GHG emissions for development projects where SCAQMD is not the lead agency:

- **Tier 1. Exemptions:** If a project is exempt from CEQA, project-level and cumulative GHG emissions are less than significant.

- **Tier 2. Consistency with a locally adopted GHG Reduction Plan:** If the project complies with a GHG emissions reduction plan or mitigation program that avoids or substantially reduces GHG emissions in the project's geographic area (i.e., city or county), project-level and cumulative GHG emissions are less than significant.

- **Tier 3. Numerical Screening Threshold:** If GHG emissions are less than the numerical screening-level threshold, project-level and cumulative GHG emissions are less than significant.

  For projects that are not exempt or where no qualifying GHG reduction plans are directly applicable, SCAQMD requires an assessment of GHG emissions. SCAQMD, under Option 1, is proposing a "bright-line" screening-level threshold of 3,000 metric tons (MT) of CO_2e (or MT CO_2e) per year (or MT CO_2e/yr) for all land use types or, under Option 2, the following land-use-specific thresholds: 1,400 MT CO_2e commercial projects; 3,500 MT CO_2e for residential projects; or 3,000 MT CO_2e for mixed-use projects. This bright-line threshold is based on a review of the Governor's Office of Planning and Research database of CEQA projects. Based on their review of

53 SCAQMD. 1993. *CEQA Air Quality Handbook* (currently under revision).

54 SCAQMD. 2003. *Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis*. August.

711 CEQA projects, 90 percent of CEQA projects would exceed the bright-line thresholds identified above. Therefore, projects that do not exceed the bright-line threshold would have a nominal and therefore less than cumulatively considerable impact on GHG emissions.

- **Tier 4. Performance Standards:** If emissions exceed the numerical screening threshold, a more detailed review of the project's GHG emissions is warranted. SCAQMD has proposed an efficiency target for projects that exceed the bright-line threshold. The current recommended approach is per capita efficiency targets. SCAQMD is not recommending use of a percent emissions reduction target. Instead, SCAQMD proposes a 2020 efficiency target of 4.8 MT CO_2e/yr per service population (for project-level analyses and 6.6 MT CO_2e/yr per service population for plan-level projects (e.g., program-level projects such as general plans). The GHG efficiency metric divides annualized GHG emissions by the service population, which is the sum of residents and employees, per the following equation:

  Rate of Emission: GHG Emissions (MT CO_2e/yr) ÷ Service Population

  The efficiency evaluation consists of comparing the project's efficiency metric to efficiency targets. Efficiency targets represent the maximum quantity of emissions each resident and employee in the State of California could emit in various years based on emissions levels necessary to achieve the statewide GHG emissions reduction goals. A project that results in a lower rate of emissions would be more efficient than a project with a higher rate of emissions, based on the same service population. The metric considers GHG reduction measures integrated into a project's design and operation (or through mitigation). The per capita efficiency targets are based on the AB 32 GHG reduction target and 2020 GHG emissions inventory prepared for the CARB's 2008 Scoping Plan.

However, the SCAQMD's thresholds are based on the AB 32 GHG reduction target and 2020 GHG emissions inventory prepared for CARB's 2008 Scoping Plan. Because the project would begin operations in the post-2020 timeframe, the 2020 numerical screening threshold of 3,000 MT CO_2e and the efficiency target of 4.8 MT CO_2e/yr per service population would need to be adjusted to reflect the State's post-2020 GHG reduction goals.

SCAQMD has yet to publish a quantified GHG efficiency threshold for the 2030 target. A scaled threshold consistent with State goals detailed in SB 32, EO B-30-15, and EO S-3-05 to reduce GHG emissions by 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050, respectively, was developed for 2024, when the proposed project is anticipated to be operational. Though the SCAQMD has not published a quantified threshold beyond 2020, this assessment uses a threshold of 2,520 MT CO_2e/yr, which was calculated for the buildout year of 2024 based on the GHG reduction goals of SB 32 and EO B-30-15. Due to uncertainty created by recent case law, this assessment does not rely on an adjusted SCAQMD service population metric.

For the purpose of this analysis, the proposed project will be compared to the adjusted screening-level Tier 3 Numerical Screening Threshold of 2,520 MT CO_2e/yr for all land use types. The project is also evaluated for compliance with the 2017 Scoping Plan.

IMPACTS ANALYSIS

This section identifies the air quality, energy, and GHG emissions impacts associated with implementation of the proposed project.

AIR QUALITY IMPACTS

Air pollutant emissions associated with the project would occur over the short term from construction activities and over the long term from operational activities associated with the proposed land uses.

Consistency with Applicable Air Quality Plans

A consistency determination plays an essential role in local agency project review by linking local planning and unique individual projects to the air quality plans. A consistency determination fulfills the CEQA goal of fully informing local agency decision-makers of the environmental costs of the project under consideration at a stage early enough to ensure that air quality concerns are addressed. Only new or amended General Plan elements, Specific Plans, and significantly unique projects need to undergo a consistency review due to the air quality plan strategy being based on projections from local General Plans.

The AQMP is based on regional growth projections developed by SCAG. The proposed project would include 185,294 sf of warehouse uses. The proposed project would not house more than 1,000 persons, occupy more than 40 acres of land, or encompass more than 650,000 sf of floor area. Thus, the proposed project would not be defined as a regionally significant project under CEQA; therefore, it does not meet SCAG's Intergovernmental Review criteria.

The City's General Plan is consistent with the SCAG Regional Comprehensive Plan Guidelines and the SCAQMD AQMP. Pursuant to the methodology provided in the SCAQMD CEQA Air Quality Handbook, consistency with the Basin 2016 AQMP is affirmed when a project (1) would not increase the frequency or severity of an air quality standards violation or cause a new violation and (2) is consistent with the growth assumptions in the AQMP. Consistency review is presented as follows:

1. The project would result in short-term construction and long-term operational pollutant emissions that are all less than the CEQA significance emissions thresholds established by SCAQMD, as demonstrated below; therefore, the project in would not result in an increase in the frequency or severity of an air quality standards violation or cause a new air quality standard violation.

2. The CEQA Air Quality Handbook indicates that consistency with AQMP growth assumptions must be analyzed for new or amended General Plan elements, Specific Plans, and significant projects. Significant projects include airports, electrical generating facilities, petroleum and gas refineries, designation of oil drilling districts, water ports, solid waste disposal sites, and offshore drilling facilities; therefore, the proposed project is not defined as significant.

Based on the consistency analysis presented above, the proposed project would be consistent with the regional AQMP.

Criteria Pollutant Analysis

The Basin is designated as non-attainment for O_3 and $PM_{2.5}$ for federal standards and non-attainment for O_3, PM_{10}, and $PM_{2.5}$ for State standards. The SCAQMD's nonattainment status is attributed to the region's development history. Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant.

In developing thresholds of significance for air pollutants, the SCAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. Therefore, additional analysis to assess cumulative impacts is unnecessary. The following analysis assesses the potential project-level construction- and operation-related air quality impacts.

Construction Emissions

During construction, short-term degradation of air quality may occur due to the release of particulate emissions generated by demolition, grading, paving, building, and other activities. Emissions from construction equipment are also anticipated and would include CO, NO_x, ROG, directly-emitted particulate matter ($PM_{2.5}$ and PM_{10}), and TACs such as diesel exhaust particulate matter.

Project construction activities would include demolition, grading, site preparation, building, paving, and architectural coating activities. Construction-related effects on air quality from the proposed project would be greatest during the site preparation phase due to the disturbance of soils. If not properly controlled, these activities would temporarily generate particulate emissions. Sources of fugitive dust would include disturbed soils at the construction site. Unless properly controlled, vehicles leaving the site would deposit dirt and mud on local streets, which could be an additional source of airborne dust after it dries. PM_{10} emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM_{10} emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of operating equipment. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

Water or other soil stabilizers can be used to control dust, resulting in emission reductions of 50 percent or more. The SCAQMD has established Rule 403: Fugitive Dust, which would require the applicant to implement measures that would reduce the amount of particulate matter generated during the construction period.

In addition to dust-related PM_{10} emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO_2, NO_x, VOCs and some soot particulate ($PM_{2.5}$

and PM_{10}) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those vehicles idle in traffic. These emissions would be temporary in nature and limited to the immediate area surrounding the construction site.

Construction emissions were estimated for the project using CalEEMod. Table I lists the tentative project construction schedule based on a 9-month duration project. Table J lists the potential construction equipment to be used during project construction under each phase of construction. Other precise details of construction activities are unknown at this time; therefore, default settings (e.g., construction equipment) from CalEEMod were assumed. Table K identifies the total annual emissions associated with construction activities. CalEEMod output sheets are included in Appendix A.

Table I: Tentative Project Construction Schedule

Phase Number	Phase Name	Phase Start Date	Phase End Date	Number of Days/Week	Number of Days
1	Demolition	3/6/2023	3/17/2023	5	10
2	Site Preparation	3/20/2023	3/31/2023	5	10
3	Grading	4/3/2023	4/21/2023	5	15
4	Building Construction	4/24/2023	12/1/2023	5	160
5	Architectural Coating	8/21/2023	12/8/2023	5	80
6	Paving	12/11/2023	12/29/2023	5	15

Source: Compiled by LSA (May 2022).

Table J: Diesel Construction Equipment Utilized by Construction Phase

Construction Phase	Off-Road Equipment Type	Off-Road Equipment Unit Amount	Hours Used per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	1	8	81	0.73
	Excavators	3	8	158	0.38
	Rubber Tired Dozers	2	8	247	0.4
Site Preparation	Rubber Tired Dozers	3	8	247	0.40
	Tractors/Loaders/Backhoes	4	8	97	0.37
Grading	Excavators	1	8	158	0.38
	Graders	1	8	187	0.41
	Rubber Tired Dozers	1	8	247	0.4
	Tractors/Loaders/Backhoes	3	8	97	0.37
Building Construction	Cranes	1	7	231	0.29
	Forklifts	3	8	89	0.2
	Generator Sets	1	8	84	0.74
	Tractors/Loaders/Backhoes	3	7	97	0.37
	Welders	1	8	46	0.45
Paving	Pavers	2	8	130	0.42
	Paving Equipment	2	8	132	0.36
	Rollers	2	8	80	0.38
Architectural Coating	Air Compressors	1	6	78	0.48

Source: Compiled by LSA using CalEEMod defaults (May 2022).
CalEEMod = California Emissions Estimator Model

Table K: Project Construction Emissions (lbs/day)

Project Construction	Maximum Pollutant Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Demolition	1.4	36.9	26.3	0.1	4.6	1.6
Site Preparation	1.3	33.8	23.6	<0.1	10.0	5.5
Grading	1.1	26.3	19.5	<0.1	4.1	2.4
Building Construction	1.6	26.1	23.8	0.1	2.8	1.4
Paving	1.3	20.2	17.8	<0.1	0.8	0.7
Architectural Coating	22.1	2.4	2.8	<0.1	0.4	0.2
Maximum (lbs/day)	**23.7**	**36.9**	**26.6**	**0.1**	**10.0**	**5.5**
SCAQMD Thresholds	75.0	100.0	550.0	150.0	150.0	55.0
Exceeds?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Compiled by LSA (May 2022).
Note: Maximum emissions of VOC and CO occurred during the overlapping building construction and architectural coating phases.
CO = carbon monoxide
lbs/day = pounds per day
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides
VOC = volatile organic compounds

As shown in Table K, construction emissions associated with the project would not exceed the SCAQMD thresholds for VOC, NO_x, CO, sulfur oxides (SO_X), $PM_{2.5,}$ or PM_{10} emissions. In addition to the construction period thresholds of significance, the project is required to comply with regional rules that assist in reducing short-term air pollutant emissions. SCAQMD Rule 403 requires that fugitive dust be controlled with best-available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. In addition, SCAQMD Rule 403 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off site. Even through the project's construction would not exceed any of the emissions thresholds as noted in Table K, compliance with Rule 403 dust suppression techniques can further reduce the fugitive dust generation (and thus, the PM_{10} component). With compliance with Rule 403, construction of the proposed project would not result in emissions that would result in a cumulatively considerable net increase of any criteria pollutant for which the project is nonattainment under an applicable federal or State ambient air quality standard. Therefore, the proposed project would not lead to new or substantially more severe significant impacts associated with construction-related air quality.

Operational Air Quality Impacts

Long-term air pollutant emission impacts are those associated with mobile sources (e.g., vehicle trips), energy sources (e.g., natural gas), and area sources (e.g., architectural coatings and the use of landscape maintenance equipment) related to the proposed project.

PM_{10} emissions result from running exhaust, tire and brake wear, and the entrainment of dust into the atmosphere from vehicles traveling on paved roadways. Entrainment of PM_{10} occurs when vehicle tires pulverize small rocks and pavement and the vehicle wakes generate airborne dust. The contribution of tire and brake wear is small compared to the other PM emission processes.

Gasoline-powered engines have small rates of particulate matter emissions compared with diesel-powered vehicles.

Energy source emissions result from activities in buildings for which electricity and natural gas are used. The quantity of emissions is the product of usage intensity (i.e., the amount of natural gas) and the emission factor of the fuel source. Major sources of energy demand for the proposed project could include building mechanical systems, such as heating and air conditioning.

Typically, area source emissions consist of direct sources of air emissions located at the project site, including architectural coatings, consumer products, and the use of landscape maintenance equipment.

Long-term operation emissions associated with the proposed project were calculated using CalEEMod. Model results are shown in Table L below. CalEEMod output sheets are included in Appendix A.

Table L: Project Operational Emissions

Emission Type	Pollutant Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area Sources	4.2	<0.1	<0.1	0.0	<0.1	<0.1
Energy Sources	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mobile Sources	1.4	8.4	15.7	0.1	4.2	1.2
Total Project Emissions	**5.6**	**8.4**	**15.7**	**0.1**	**4.2**	**1.2**
SCAQMD Thresholds	**55.0**	**55.0**	**550.0**	**150.0**	**55.0**	**150.0**
Significant?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Compiled by LSA (May 2022).
CO = carbon monoxide
NO_x = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides
ROG = volatile organic compounds

The results shown in Table L indicate the project would not exceed the significance criteria for VOC, NO_x, CO, SO_x, PM_{10}, or $PM_{2.5}$ emissions; thus, the proposed project would not have a significant effect on regional air quality. Therefore, operation of the project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project is nonattainment under an applicable federal or State ambient air quality standard.

Health Risk on Nearby Sensitive Receptors

Sensitive receptors are defined as people that have an increased sensitivity to air pollution or environmental contaminants. Sensitive receptor locations include schools, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential dwelling units. The closest sensitive receptors to the project site are residential uses such as single-family homes located approximately 100 feet from the project site opposite of Norwalk Boulevard and the Lakeland Villa Mobile Home Park located approximately 175 feet northwest opposite of Lakeland Road.

Construction of the proposed project may expose surrounding sensitive receptors to airborne particulates, as well as a small quantity of construction equipment pollutants (i.e., usually diesel-fueled vehicles and equipment). However, construction contractors would be required to implement SCAQMD Rule 403 dust suppression techniques to prevent fugitive dust from creating a nuisance off site. Even through the project's construction would not exceed any of the emissions thresholds as noted in Table K, compliance with Rule 403 dust suppression techniques can further reduce the fugitive dust generation (and thus, the PM_{10} component). With compliance with Rule 403, project construction pollutant emissions would be below the SCAQMD significance thresholds.

To determine the potential health risk to people living and working near the proposed project associated with the exhaust of diesel-powered trucks and equipment, an operational HRA was conducted for the proposed project. The carcinogenic and chronic health risks from the proposed project are shown in Table M. The residential risk incorporates both the risk for a child living in a nearby residence for 9 years (the standard period of time for child risk) and an adult living in a nearby residence for 30 years (considered a conservative period of time for an individual to live in any one residence). The HRA model snapshots and outputs are included in Appendix B.

Table M: Health Risks from Project Operation to Off-Site Receptors

Location	Carcinogenic Inhalation Health Risk in One Million	Chronic Inhalation Hazard Index	Acute Inhalation Hazard Index
Worker Receptor Risk	0.89	0.002	0.000
Sensitive Receptor Risk	5.54	0.002	0.000
SCAQMD Significance Threshold	**10.0 in one million**	**1.0**	**1.0**
Significant?	**No**	**No**	**No**

Source: LSA (May 2022).
SCAQMD = South Coast Air Quality Management District

As shown in Table M, the maximum cancer risk for the sensitive receptor MEI would be 5.54 in one million, less than the threshold of 10 in one million. The worker receptor risk would be lower at 0.89 in one million. The total chronic hazard index would be 0.002 for both the sensitive and worker receptor MEI, which is below the threshold of 1.0. In addition, the total acute hazard index would be nominal (0.000), which would also not exceed the threshold of 1.0. As these results show, all health risk levels to nearby residents from operation-related emissions of TACs would be well below the SCAQMD's HRA thresholds. No significant health risk would occur from project operation emissions.

Odors

During project construction, some odors may be present due to diesel exhaust. However, these odors would be temporary and limited to the construction period. The proposed project would not include any activities or operations that would generate objectionable odors and once operational, the project would not be a source of odors. Therefore, the proposed project would not result in other emissions (such as those leading to odors) affecting a substantial number of people

ENERGY IMPACTS

The following describes the potential impacts regarding energy resources that could result from implementation of the proposed project.

Energy Consumption

The proposed project would increase the demand for energy through day-to-day operations and fuel consumption associated with project construction. This section discusses energy use resulting from implementation of the proposed project and evaluates whether the proposed project would result in the wasteful, inefficient, or unnecessary consumption of energy resources or conflict with any applicable plans for renewable energy and energy efficiency.

Construction Energy Use

Construction of the proposed project is anticipated to begin in the first quarter of 2023 and occur for 9 months. The project would require energy for activities such as the manufacture and transportation of building materials, grading activities, and building construction. Construction of the proposed project would require electricity to power construction-related equipment. Construction of the proposed project would not involve the consumption of natural gas. The construction-related equipment would not be powered by natural gas, and no natural gas demand is anticipated during construction.

Transportation energy represents the largest energy use during construction and would occur from the transport and use of construction equipment, delivery vehicles and haul trucks, and construction worker vehicles that would use petroleum fuels (e.g., diesel fuel and/or gasoline). Therefore, the analysis of energy use during construction focuses on fuel consumption. Construction trucks and vendor trucks hauling materials to and from the project site would be anticipated to use diesel fuel, whereas construction workers traveling to and from the project site would be anticipated to use gasoline-powered vehicles. Fuel consumption from transportation uses depends on the type and number of trips, VMT, the fuel efficiency of the vehicles, and the travel mode.

Estimates of fuel consumption (diesel fuel and gasoline) from construction equipment, construction trucks, and construction worker vehicles were based on default construction equipment assumptions and trip estimates from CalEEMod and fuel efficiencies from EMFAC2021. Fuel consumption estimates are presented in Table N. CalEEMod output sheets are included in Appendix A and detailed energy calculations are included in Appendix C.

Table N: Proposed Project Energy Consumption Estimates during Construction

Energy Type	Total Energy Consumption	Percentage Increase Countywide
Diesel Fuel (total gallons)	44,646	0.01
Gasoline (total gallons)	29,423	<0.01

Source: Compiled by LSA (May 2022).

As indicated in Table N, the project would consume approximately 29,423 gallons of diesel fuel and approximately 44,646 gallons of gasoline during construction. Based on fuel consumption obtained from EMFAC2021, approximately 3,985 million gallons of gasoline and approximately 600 million gallons of diesel will be consumed from vehicle trips in Los Angeles County in 2022. Therefore, construction of the proposed project would increase the annual construction generated fuel use in Los Angeles County by approximately 0.01 percent for diesel fuel usage and by less than 0.01 percent for gasoline fuel usage. As such, project construction would have a negligible effect on local and regional energy supplies. Furthermore, impacts related to energy use during construction would be temporary and relatively small in comparison to Los Angeles County's overall use of the State's available energy resources. No unusual project characteristics would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in the region or the State. In addition, construction activities are not anticipated to result in an inefficient use of energy as gasoline and diesel fuel would be supplied by construction contractors who would conserve the use of their supplies to minimize their costs on the project. The project would not cause or result in the need for additional energy facilities or an additional or expanded delivery system. For these reasons, fuel consumption during construction would not be inefficient, wasteful, or unnecessary.

Operational Energy Usage

Operational energy use is typically associated with natural gas use, electricity consumption, and fuel used for vehicle trips associated with a project. Energy consumption was estimated for the proposed project using default energy intensities by land use type in CalEEMod.

The proposed project would also result in energy usage associated with gasoline and diesel fuel consumed by project-related vehicle and truck trips. Fuel use associated with vehicle and truck trips generated by the proposed project was calculated based on the project's Trip Generation and VMT Screening Analysis [55], which identifies that the proposed project would generate approximately 318 average daily trips, including 225 passenger vehicle trips, 18 two-axle truck trips, 18 three-axle truck trips, and 57 four-axle truck trips. The amount of operational fuel use was estimated using CARB's EMFAC2021 model, which provided projections for typical daily fuel usage in Los Angeles County.

Electricity, natural gas, and fuel usage estimates associated with the proposed project are shown in Table O.

[55] Environment Planning Development Solutions, Inc. 2022. op. cit.

Table O: Proposed Project Energy Consumption Estimates during Operation

Energy Type	Annual Energy Consumption	Percentage Increase Countywide
Electricity Consumption (kWh/year)	983,198	<0.01
Natural Gas Consumption (therms/year)	1,627	<0.01
Automotive Fuel Consumption		
Gasoline (gallons/year)	95,883	<0.01
Diesel Fuel (gallons/year)	117,997	0.02

Source: Compiled by LSA (May 2022).
kWh = kilowatt-hours

As shown in Table O, the estimated potential increase in electricity demand associated with the operation of the proposed project is 983,198 kilowatt-hours (kWh) per year. Total electricity demand in Los Angeles County in 2020 was approximately 65,649.9 GWh (65,649,878,013 kWh). Therefore, operation of the proposed project would increase the annual electricity consumption in Los Angeles County by less than 0.01 percent.

As shown in Table O, the estimated potential increase in natural gas demand associated with the proposed project is 1,627 therms per year. Total natural gas consumption in Los Angeles County in 2020 was approximately 2,936.7 million therms (2,936,687,098 therms). Therefore, operation of the proposed project would negligibly increase the annual natural gas consumption in Los Angeles County by less than 0.01 percent.

Electrical and natural gas demand associated with project operations would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region. Furthermore, the proposed project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. The project would be required to adhere to all federal, State, and local requirements for energy efficiency, including the Title 24 standards. Title 24 building energy efficiency standards establish minimum efficiency standards related to various building features, including appliances, water and space heating and cooling equipment, building insulation and roofing, and lighting, which would reduce energy usage. In addition, the project would implement sustainable features such as drought tolerant landscaping, energy efficient water fixtures, and would be LEED Silver Certified.

As shown in Table O, fuel use associated with the vehicle trips generated by the proposed project is estimated at 95,883 gallons of gasoline and 117,997 gallons of diesel fuel per year. This analysis conservatively assumes that all vehicle trips generated as a result of project operation would be new to Los Angeles County. Based on fuel consumption obtained from EMFAC2021, approximately 3,985 million gallons of gasoline and approximately 600 million gallons of diesel will be consumed from vehicle trips in Los Angeles County in 2022. Therefore, vehicle and truck trips associated with the proposed project would increase the annual fuel use in Los Angeles County by less than 0.01 percent for gasoline fuel usage and approximately 0.02 percent for diesel fuel usage. Fuel consumption associated with vehicle trips generated by project operations would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region.

Conflict with Renewable Energy or Energy Efficiency Plans

In 2002, the Legislature passed SB 1389, which required the CEC to develop an integrated energy plan every two years for electricity, natural gas, and transportation fuels for the Integrated Energy Policy Report. The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for ZEVs and their infrastructure needs, and encouragement of urban designs that reduce VMT and accommodate pedestrian and bicycle access.

The CEC's *2021 Integrated Energy Policy Report* and *2022 Integrated Energy Policy Report Update* provide the results of the CEC's assessments of a variety of energy issues facing California. As indicated above, energy usage on the project site during construction would be temporary in nature and would be relatively small in comparison to the overall use in the County. In addition, energy usage associated with operation of the proposed project would be relatively small in comparison to the overall use in Los Angeles County, and the State's available energy resources. Therefore, energy impacts at the regional level would be negligible. Because California's energy conservation planning actions are conducted at a regional level, and because the proposed project's total impact on regional energy supplies would be minor, the proposed project would not conflict with or obstruct California's energy conservation plans as described in the CEC's Integrated Energy Policy Report. Additionally, as demonstrated above, the proposed project would not result in the inefficient, wasteful, and unnecessary consumption of energy. Potential impacts related to conflict with or obstruction of a State or local plan for renewable energy or energy efficiency would be less than significant, and no mitigation is required.

GREENHOUSE GAS IMPACTS

This section describes the potential GHG impacts associated with implementation the proposed project.

Generation of Greenhouse Gas Emissions

This section describes the proposed project's construction- and operational-related GHG emissions and contribution to global climate change. The SCAQMD has not addressed emission thresholds for construction in their CEQA Handbook; however, the SCAQMD requires quantification and disclosure. Thus, an evaluation of the project's impacts related to the release of GHG emissions for both construction and operational phases of the project is described below.

Short-Term Greenhouse Gas Emissions

Demolition and construction activities associated with the proposed project would produce combustion emissions from various sources. During construction, GHGs would be emitted through the operation of construction equipment and from worker and builder supply vendor vehicles, each of which typically use fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs such as CO_2, CH_4, and N_2O. Furthermore, CH_4 is emitted during the fueling of heavy

equipment. Exhaust emissions from on-site construction activities would vary daily as construction activity levels change.

As indicated above, the SCAQMD does not have an adopted threshold of significance for construction-related GHG emissions. However, lead agencies are required to quantify and disclose GHG emissions that would occur during construction. The SCAQMD then requires the construction GHG emissions to be amortized over the life of the project, defined by the SCAQMD as 30 years[56], added to the operational emissions, and compared to the applicable interim GHG significance threshold tier.

Using CalEEMod, it is estimated that the project would generate approximately 471.7 MT CO_2e during construction of the project. When annualized over the 30-year life of the project, annual emissions would be 15.7 MT CO_2e. Table P lists the construction GHG emissions (details are provided in the CalEEMod output in Appendix A). Construction emissions would be temporary in nature and would only occur for the duration of the construction period.

Table P: Construction Greenhouse Gas Emissions

Construction Year	Annual Emissions (metric tons per year)			
	CO_2	CH_4	N_2O	CO_2e
2023	465.2	0.1	<0.1	471.7
Amortized Construction Emissions				**15.7**

Source: Compiled by LSA (May 2022).
CH_4 = methane
CO_2 = carbon dioxide
CO_2e = carbon dioxide equivalent
N_2O = nitrous oxide

Long-Term Greenhouse Gas Emissions

Long-term GHG emissions are typically generated from mobile sources (e.g., vehicle trips), area sources (e.g., maintenance activities and landscaping), indirect emissions from sources associated with energy consumption, waste sources (land filling and waste disposal), and water sources (water supply and conveyance, treatment, and distribution). Mobile-source GHG emissions would include project-generated vehicle trips to and from the project. Area-source emissions would be associated with activities such as landscaping and maintenance on the project site. Energy source emissions would be generated at off-site utility providers because of increased electricity demand generated by the project. Waste source emissions generated by the proposed project include energy generated by land filling and other methods of disposal related to transporting and managing project-generated waste. In addition, water source emissions associated with the proposed project are generated by water supply and conveyance, water treatment, water distribution, and wastewater treatment.

[56] The SCAQMD has identified the average operational lifespan of buildings to be 30 years. Website: http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgattachmente.pdf

Following guidance from the SCAQMD, GHG emissions were estimated for the operational year of 2024 using CalEEMod. Table Q shows the calculated GHG emissions for the proposed project.

Table Q: Greenhouse Gas Emissions (MT/year)

Emissions Source	Operational Emissions				
	CO_2	CH_4	N_2O	CO_2e	Percent of Total
Area Sources	<0.1	<0.1	0.0	<0.1	<1
Energy Sources	183.0	<0.1	<0.1	184.0	12
Mobile Sources	1,070.6	0.1	0.1	1,103.8	73
Waste Sources	35.5	2.1	0.0	87.9	6
Water Sources	93.0	1.1	<0.1	129.3	9
Total Project Operational Emissions				**1,505.0**	**-**
Amortized Construction Emissions				15.7	-
Total Annual Emissions				**1,520.7**	**-**
SCAQMD Threshold				2,520	-
Exceed?				**No**	**-**

Source: Compiled by LSA (May 2022).
CH_4 = methane
CO_2 = carbon dioxide
CO_2e = carbon dioxide equivalent
MT/yr = metric tons per year
N_2O = nitrous oxide
SCAQMD = South Coast Air Quality Management District

As discussed above, a project would have less than significant GHG emissions if it would result in operational-related GHG emissions of less than 2,520 MT CO_2e/yr. Based on the analysis results, the proposed project would result in approximately 1,520.7 MT CO_2e/yr. Therefore, operation of the proposed project would not generate significant GHG emissions that would have a significant effect on the environment.

Consistency with Greenhouse Gas Emissions Reduction Plans

As discussed above, the City has not adopted a GHG Reduction Plan or Climate Action Plan; however, the proposed project was analyzed for consistency with the goals of AB 32 and the AB 32 Scoping Plan. The following discussion evaluates the proposed project according to the goals of AB 32, the AB 32 Scoping Plan, EO B-30-15, SB 32, and AB 197.

AB 32 is aimed at reducing GHG emissions to 1990 levels by 2020. AB 32 requires the CARB to prepare a Scoping Plan that outlines the main State strategies for meeting the 2020 deadline and to reduce GHGs that contribute to global climate change. The AB 32 Scoping Plan has a range of GHG reduction actions, which includes direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as a cap-and-trade system, and an AB 32 implementation fee to fund the program.

EO B-30-15 added the immediate target of reducing GHG emissions to 40 percent below 1990 levels by 2030. CARB released a second update to the Scoping Plan, the 2017 Scoping Plan, to reflect the 2030 target set by EO B-30-15 and codified by SB 32. SB 32 affirms the importance of addressing climate change by codifying into statute the GHG emissions reductions target of at least 40 percent

below 1990 levels by 2030 contained in EO B-30-15. SB 32 builds on AB 32 and keeps the State on the path toward achieving the 2050 objective of reducing emissions to 80 percent below 1990 levels. The companion bill to SB 32, AB 197, provides additional direction to the CARB related to the adoption of strategies to reduce GHG emissions. Additional direction in AB 197 intended to provide easier public access to air emissions data that are collected by CARB was posted in December 2016.

As identified above, the AB 32 Scoping Plan contains GHG reduction measures that work towards reducing GHG emissions, consistent with the targets set by AB 32 and EO B-30-15 and codified by SB 32 and AB 197. The measures applicable to the proposed project include energy efficiency measures, water conservation and efficiency measures, and transportation and motor vehicle measures, as discussed below.

Energy efficient measures are intended to maximize energy efficiency building and appliance standards, pursue additional efficiency efforts including new technologies and new policy and implementation mechanisms, and pursue comparable investment in energy efficiency from all retail providers of electricity in California. In addition, these measures are designed to expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings. The proposed project would be required to comply with the latest Title 24 standards of the CCR, established by the CEC, regarding energy conservation and green building standards. In addition, the proposed project would include energy efficient water fixtures and would be LEED Silver. Therefore, the proposed project would comply with applicable energy measures.

Water conservation and efficiency measures are intended to continue efficiency programs and use cleaner energy sources to move and treat water. Increasing the efficiency of water transport and reducing water use would reduce GHG emissions. As noted above, the proposed project would be required to comply with the latest Title 24 standards of the CCR, which includes a variety of different measures, including reduction of wastewater and water use. Therefore, the proposed project would not conflict with any of the water conservation and efficiency measures.

The goal of transportation and motor vehicle measures is to develop regional GHG emissions reduction targets for passenger vehicles. The second phase of Pavley standards will reduce GHG emissions from new cars by 34 percent from 2016 levels by 2025, resulting in a 3 percent decrease in average vehicle emissions for all vehicles by 2020. Vehicles traveling to the project site would comply with the Pavley II (LEV III) Advanced Clean Cars Program. Therefore, the proposed project would not conflict with the identified transportation and motor vehicle measures.

As such, the proposed project would comply with existing State regulations adopted to achieve the overall GHG emissions reduction goals identified in AB 32 and would be consistent with applicable plans and programs designed to reduce GHG emissions. Therefore, the proposed project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

CONCLUSIONS

Based on the analysis presented above, the proposed project would not conflict with or obstruct implementation of SCAQMD air quality plans. In addition, construction and operation of the proposed project would not result in the generation of criteria air pollutants that would exceed SCAQMD thresholds of significance. The proposed project is not expected to produce significant emissions that would affect nearby sensitive receptors. In addition, the proposed project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation and would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. The project would also not result in objectionable odors affecting a substantial number of people. With regards to GHGs, the project would not result in substantial emissions during construction or operation. Additionally, the proposed project would not conflict with the objectives embodied in AB 32, EO B-30-15, SB 32, or AB 197. Therefore, the proposed project's incremental contribution to cumulative GHG emissions would not be cumulatively considerable.

APPENDIX A

CALEEMOD OUTPUT

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

12300 Lakeland Warehouse Project

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Refrigerated Warehouse-No Rail	18.60	1000sqft	0.60	18,573.00	0
Unrefrigerated Warehouse-No Rail	167.20	1000sqft	4.51	167,160.00	0
Parking Lot	233.00	Space	2.10	93,200.00	0
City Park	1.24	Acre	1.24	53,927.28	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Assuming 10% of building square footage is refrigerated and 90% is unrefrigerated. Total project site is 8.45 acres.

Construction Phase - Assumming overlap of contrsuction and architectual coating. Construction starts the first quarter of 2023 and occurs for 9 months

Demolition - Project will demolish existing buildings in project site.

Vehicle Trips - project trip generation for 318 trips and operational trip length of 25

Construction Off-road Equipment Mitigation - assuming use of tier 2 construction

Water Mitigation - energy efficiency water fixtures and drought tolerant landscaping

Fleet Mix - 75 truck trips and 243 auto trips

Grading -

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2

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tblConstructionPhase	NumDays	20.00	80.00
tblConstructionPhase	NumDays	230.00	160.00
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	20.00	15.00
tblConstructionPhase	NumDays	20.00	15.00
tblFleetMix	HHD	8.0790e-003	0.25
tblFleetMix	HHD	8.0790e-003	0.17
tblFleetMix	LDA	0.54	0.25
tblFleetMix	LDA	0.54	0.34
tblFleetMix	MHD	0.01	0.06
tblFleetMix	MHD	0.01	0.06
tblFleetMix	OBUS	9.2300e-004	0.00
tblFleetMix	OBUS	9.2300e-004	0.00
tblFleetMix	SBUS	7.0200e-004	0.00
tblFleetMix	SBUS	7.0200e-004	0.00
tblFleetMix	UBUS	6.0400e-004	0.00
tblFleetMix	UBUS	6.0400e-004	0.00
tblLandUse	LandUseSquareFeet	18,600.00	18,573.00
tblLandUse	LandUseSquareFeet	167,200.00	167,160.00
tblLandUse	LandUseSquareFeet	54,014.40	53,927.28
tblLandUse	LotAcreage	0.43	0.60
tblLandUse	LotAcreage	3.84	4.51
tblVehicleTrips	CW_TL	16.60	25.00
tblVehicleTrips	CW_TL	16.60	25.00
tblVehicleTrips	ST_TR	1.96	0.00
tblVehicleTrips	ST_TR	2.12	1.72
tblVehicleTrips	ST_TR	1.74	1.71
tblVehicleTrips	SU_TR	2.19	0.00
tblVehicleTrips	SU_TR	2.12	1.72

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tblVehicleTrips	SU_TR	1.74	1.71
tblVehicleTrips	WD_TR	0.78	0.00
tblVehicleTrips	WD_TR	2.12	1.72
tblVehicleTrips	WD_TR	1.74	1.71

2.0 Emissions Summary

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	1.1009	1.8894	2.2874	5.1700e-003	0.3543	0.0816	0.4359	0.1270	0.0766	0.2035	0.0000	465.1505	465.1505	0.0722	0.0158	471.6699
Maximum	**1.1009**	**1.8894**	**2.2874**	**5.1700e-003**	**0.3543**	**0.0816**	**0.4359**	**0.1270**	**0.0766**	**0.2035**	**0.0000**	**465.1505**	**465.1505**	**0.0722**	**0.0158**	**471.6699**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	1.0402	2.8888	2.5195	5.1700e-003	0.2527	0.0980	0.3508	0.0823	0.0979	0.1802	0.0000	465.1502	465.1502	0.0722	0.0158	471.6696
Maximum	**1.0402**	**2.8888**	**2.5195**	**5.1700e-003**	**0.2527**	**0.0980**	**0.3508**	**0.0823**	**0.0979**	**0.1802**	**0.0000**	**465.1502**	**465.1502**	**0.0722**	**0.0158**	**471.6696**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**5.52**	**-52.90**	**-10.15**	**0.00**	**28.66**	**-20.12**	**19.53**	**35.19**	**-27.89**	**11.46**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-2-2023	4-1-2023	0.2502	0.3141
2	4-2-2023	7-1-2023	0.5994	0.8651
3	7-2-2023	9-30-2023	0.9580	1.2543
		Highest	0.9580	1.2543

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.7656	5.0000e-005	5.3500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0104	0.0104	3.0000e-005	0.0000	0.0111
Energy	8.8000e-004	7.9800e-003	6.7000e-003	5.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	183.0481	183.0481	0.0149	1.9400e-003	183.9992
Mobile	0.2451	1.5439	2.8109	0.0111	0.7394	0.0112	0.7507	0.1998	0.0106	0.2104	0.0000	1,070.5717	1,070.5717	0.0559	0.1067	1,103.7662
Waste						0.0000	0.0000		0.0000	0.0000	35.4747	0.0000	35.4747	2.0965	0.0000	87.8871
Water						0.0000	0.0000		0.0000	0.0000	13.6312	102.1294	115.7606	1.4087	0.0341	161.1402
Total	**1.0116**	**1.5519**	**2.8230**	**0.0112**	**0.7394**	**0.0119**	**0.7513**	**0.1998**	**0.0113**	**0.2110**	**49.1059**	**1,355.7596**	**1,404.8655**	**3.5759**	**0.1427**	**1,536.8039**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.7656	5.0000e-005	5.3500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0104	0.0104	3.0000e-005	0.0000	0.0111
Energy	8.8000e-004	7.9800e-003	6.7000e-003	5.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	183.0481	183.0481	0.0149	1.9400e-003	183.9992
Mobile	0.2451	1.5439	2.8109	0.0111	0.7394	0.0112	0.7507	0.1998	0.0106	0.2104	0.0000	1,070.5717	1,070.5717	0.0559	0.1067	1,103.7662
Waste						0.0000	0.0000		0.0000	0.0000	35.4747	0.0000	35.4747	2.0965	0.0000	87.8871
Water						0.0000	0.0000		0.0000	0.0000	10.9050	82.1081	93.0131	1.1270	0.0273	129.3189
Total	**1.0116**	**1.5519**	**2.8230**	**0.0112**	**0.7394**	**0.0119**	**0.7513**	**0.1998**	**0.0113**	**0.2110**	**46.3797**	**1,335.7384**	**1,382.1180**	**3.2942**	**0.1359**	**1,504.9826**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**5.55**	**1.48**	**1.62**	**7.88**	**4.77**	**2.07**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/6/2023	3/17/2023	5	10	
2	Site Preparation	Site Preparation	3/20/2023	3/31/2023	5	10	
3	Grading	Grading	4/3/2023	4/21/2023	5	15	

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4	Building Construction	Building Construction	4/24/2023	12/1/2023	5	160	
5	Architectural Coating	Architectural Coating	8/21/2023	12/8/2023	5	80	
6	Paving	Paving	12/11/2023	12/29/2023	5	15	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 15

Acres of Paving: 2.1

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 278,600; Non-Residential Outdoor: 92,867; Striped Parking Area: 5,592 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36

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Paving	Rollers	2	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	307.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	140.00	55.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	28.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0332	0.0000	0.0332	5.0300e-003	0.0000	5.0300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0114	0.1074	0.0982	1.9000e-004		4.9900e-003	4.9900e-003		4.6400e-003	4.6400e-003	0.0000	16.9960	16.9960	4.7600e-003	0.0000	17.1150
Total	**0.0114**	**0.1074**	**0.0982**	**1.9000e-004**	**0.0332**	**4.9900e-003**	**0.0382**	**5.0300e-003**	**4.6400e-003**	**9.6700e-003**	**0.0000**	**16.9960**	**16.9960**	**4.7600e-003**	**0.0000**	**17.1150**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.2000e-004	0.0211	5.3800e-003	9.0000e-005	2.6400e-003	1.3000e-004	2.7700e-003	7.3000e-004	1.2000e-004	8.5000e-004	0.0000	8.9532	8.9532	4.9000e-004	1.4200e-003	9.3892
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4000e-004	1.9000e-004	2.5600e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6624	0.6624	2.0000e-005	2.0000e-005	0.6679
Total	**5.6000e-004**	**0.0213**	**7.9400e-003**	**1.0000e-004**	**3.4600e-003**	**1.4000e-004**	**3.6000e-003**	**9.5000e-004**	**1.2000e-004**	**1.0700e-003**	**0.0000**	**9.6156**	**9.6156**	**5.1000e-004**	**1.4400e-003**	**10.0571**

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3.2 Demolition - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0150	0.0000	0.0150	2.2600e-003	0.0000	2.2600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.3100e-003	0.1633	0.1234	1.9000e-004		4.5700e-003	4.5700e-003		4.5700e-003	4.5700e-003	0.0000	16.9960	16.9960	4.7600e-003	0.0000	17.1150
Total	**6.3100e-003**	**0.1633**	**0.1234**	**1.9000e-004**	**0.0150**	**4.5700e-003**	**0.0195**	**2.2600e-003**	**4.5700e-003**	**6.8300e-003**	**0.0000**	**16.9960**	**16.9960**	**4.7600e-003**	**0.0000**	**17.1150**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.2000e-004	0.0211	5.3800e-003	9.0000e-005	2.6400e-003	1.3000e-004	2.7700e-003	7.3000e-004	1.2000e-004	8.5000e-004	0.0000	8.9532	8.9532	4.9000e-004	1.4200e-003	9.3892
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4000e-004	1.9000e-004	2.5600e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6624	0.6624	2.0000e-005	2.0000e-005	0.6679
Total	**5.6000e-004**	**0.0213**	**7.9400e-003**	**1.0000e-004**	**3.4600e-003**	**1.4000e-004**	**3.6000e-003**	**9.5000e-004**	**1.2000e-004**	**1.0700e-003**	**0.0000**	**9.6156**	**9.6156**	**5.1000e-004**	**1.4400e-003**	**10.0571**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0983	0.0000	0.0983	0.0505	0.0000	0.0505	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0133	0.1376	0.0912	1.9000e-004		6.3300e-003	6.3300e-003		5.8200e-003	5.8200e-003	0.0000	16.7254	16.7254	5.4100e-003	0.0000	16.8606
Total	**0.0133**	**0.1376**	**0.0912**	**1.9000e-004**	**0.0983**	**6.3300e-003**	**0.1046**	**0.0505**	**5.8200e-003**	**0.0563**	**0.0000**	**16.7254**	**16.7254**	**5.4100e-003**	**0.0000**	**16.8606**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.9000e-004	2.3000e-004	3.0700e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.7949	0.7949	2.0000e-005	2.0000e-005	0.8015
Total	**2.9000e-004**	**2.3000e-004**	**3.0700e-003**	**1.0000e-005**	**9.9000e-004**	**1.0000e-005**	**9.9000e-004**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.7949**	**0.7949**	**2.0000e-005**	**2.0000e-005**	**0.8015**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0442	0.0000	0.0442	0.0227	0.0000	0.0227	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.0500e-003	0.1686	0.1148	1.9000e-004		4.7300e-003	4.7300e-003		4.7300e-003	4.7300e-003	0.0000	16.7253	16.7253	5.4100e-003	0.0000	16.8606
Total	**6.0500e-003**	**0.1686**	**0.1148**	**1.9000e-004**	**0.0442**	**4.7300e-003**	**0.0490**	**0.0227**	**4.7300e-003**	**0.0275**	**0.0000**	**16.7253**	**16.7253**	**5.4100e-003**	**0.0000**	**16.8606**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.9000e-004	2.3000e-004	3.0700e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.7949	0.7949	2.0000e-005	2.0000e-005	0.8015
Total	**2.9000e-004**	**2.3000e-004**	**3.0700e-003**	**1.0000e-005**	**9.9000e-004**	**1.0000e-005**	**9.9000e-004**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.7949**	**0.7949**	**2.0000e-005**	**2.0000e-005**	**0.8015**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0531	0.0000	0.0531	0.0257	0.0000	0.0257	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0128	0.1345	0.1106	2.2000e-004		5.8100e-003	5.8100e-003		5.3500e-003	5.3500e-003	0.0000	19.5455	19.5455	6.3200e-003	0.0000	19.7035
Total	**0.0128**	**0.1345**	**0.1106**	**2.2000e-004**	**0.0531**	**5.8100e-003**	**0.0589**	**0.0257**	**5.3500e-003**	**0.0310**	**0.0000**	**19.5455**	**19.5455**	**6.3200e-003**	**0.0000**	**19.7035**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.6000e-004	2.8000e-004	3.8400e-003	1.0000e-005	1.2300e-003	1.0000e-005	1.2400e-003	3.3000e-004	1.0000e-005	3.3000e-004	0.0000	0.9936	0.9936	3.0000e-005	3.0000e-005	1.0018
Total	**3.6000e-004**	**2.8000e-004**	**3.8400e-003**	**1.0000e-005**	**1.2300e-003**	**1.0000e-005**	**1.2400e-003**	**3.3000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**0.9936**	**0.9936**	**3.0000e-005**	**3.0000e-005**	**1.0018**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0239	0.0000	0.0239	0.0116	0.0000	0.0116	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.5700e-003	0.1971	0.1424	2.2000e-004		5.7900e-003	5.7900e-003		5.7900e-003	5.7900e-003	0.0000	19.5454	19.5454	6.3200e-003	0.0000	19.7035
Total	**7.5700e-003**	**0.1971**	**0.1424**	**2.2000e-004**	**0.0239**	**5.7900e-003**	**0.0297**	**0.0116**	**5.7900e-003**	**0.0174**	**0.0000**	**19.5454**	**19.5454**	**6.3200e-003**	**0.0000**	**19.7035**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.6000e-004	2.8000e-004	3.8400e-003	1.0000e-005	1.2300e-003	1.0000e-005	1.2400e-003	3.3000e-004	1.0000e-005	3.3000e-004	0.0000	0.9936	0.9936	3.0000e-005	3.0000e-005	1.0018
Total	**3.6000e-004**	**2.8000e-004**	**3.8400e-003**	**1.0000e-005**	**1.2300e-003**	**1.0000e-005**	**1.2400e-003**	**3.3000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**0.9936**	**0.9936**	**3.0000e-005**	**3.0000e-005**	**1.0018**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1258	1.1508	1.2995	2.1600e-003		0.0560	0.0560		0.0527	0.0527	0.0000	185.4438	185.4438	0.0441	0.0000	186.5467
Total	**0.1258**	**1.1508**	**1.2995**	**2.1600e-003**		**0.0560**	**0.0560**		**0.0527**	**0.0527**	**0.0000**	**185.4438**	**185.4438**	**0.0441**	**0.0000**	**186.5467**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.9700e-003	0.1773	0.0664	8.2000e-004	0.0277	8.5000e-004	0.0286	8.0000e-003	8.1000e-004	8.8200e-003	0.0000	80.0018	80.0018	2.6700e-003	0.0115	83.4996
Worker	0.0356	0.0282	0.3826	1.0700e-003	0.1227	7.6000e-004	0.1235	0.0326	7.0000e-004	0.0333	0.0000	98.9158	98.9158	2.6000e-003	2.5400e-003	99.7385
Total	**0.0405**	**0.2056**	**0.4490**	**1.8900e-003**	**0.1505**	**1.6100e-003**	**0.1521**	**0.0406**	**1.5100e-003**	**0.0421**	**0.0000**	**178.9176**	**178.9176**	**5.2700e-003**	**0.0141**	**183.2382**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0865	1.8844	1.4299	2.1600e-003		0.0723	0.0723		0.0723	0.0723	0.0000	185.4436	185.4436	0.0441	0.0000	186.5464
Total	**0.0865**	**1.8844**	**1.4299**	**2.1600e-003**		**0.0723**	**0.0723**		**0.0723**	**0.0723**	**0.0000**	**185.4436**	**185.4436**	**0.0441**	**0.0000**	**186.5464**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.9700e-003	0.1773	0.0664	8.2000e-004	0.0277	8.5000e-004	0.0286	8.0000e-003	8.1000e-004	8.8200e-003	0.0000	80.0018	80.0018	2.6700e-003	0.0115	83.4996
Worker	0.0356	0.0282	0.3826	1.0700e-003	0.1227	7.6000e-004	0.1235	0.0326	7.0000e-004	0.0333	0.0000	98.9158	98.9158	2.6000e-003	2.5400e-003	99.7385
Total	**0.0405**	**0.2056**	**0.4490**	**1.8900e-003**	**0.1505**	**1.6100e-003**	**0.1521**	**0.0406**	**1.5100e-003**	**0.0421**	**0.0000**	**178.9176**	**178.9176**	**5.2700e-003**	**0.0141**	**183.2382**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.8738					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.6700e-003	0.0521	0.0724	1.2000e-004		2.8300e-003	2.8300e-003		2.8300e-003	2.8300e-003	0.0000	10.2130	10.2130	6.1000e-004	0.0000	10.2283
Total	**0.8815**	**0.0521**	**0.0724**	**1.2000e-004**		**2.8300e-003**	**2.8300e-003**		**2.8300e-003**	**2.8300e-003**	**0.0000**	**10.2130**	**10.2130**	**6.1000e-004**	**0.0000**	**10.2283**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5600e-003	2.8200e-003	0.0383	1.1000e-004	0.0123	8.0000e-005	0.0124	3.2600e-003	7.0000e-005	3.3300e-003	0.0000	9.8916	9.8916	2.6000e-004	2.5000e-004	9.9739
Total	**3.5600e-003**	**2.8200e-003**	**0.0383**	**1.1000e-004**	**0.0123**	**8.0000e-005**	**0.0124**	**3.2600e-003**	**7.0000e-005**	**3.3300e-003**	**0.0000**	**9.8916**	**9.8916**	**2.6000e-004**	**2.5000e-004**	**9.9739**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.8738					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.5600e-003	0.0941	0.0733	1.2000e-004		3.8000e-003	3.8000e-003		3.8000e-003	3.8000e-003	0.0000	10.2130	10.2130	6.1000e-004	0.0000	10.2283
Total	**0.8784**	**0.0941**	**0.0733**	**1.2000e-004**		**3.8000e-003**	**3.8000e-003**		**3.8000e-003**	**3.8000e-003**	**0.0000**	**10.2130**	**10.2130**	**6.1000e-004**	**0.0000**	**10.2283**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5600e-003	2.8200e-003	0.0383	1.1000e-004	0.0123	8.0000e-005	0.0124	3.2600e-003	7.0000e-005	3.3300e-003	0.0000	9.8916	9.8916	2.6000e-004	2.5000e-004	9.9739
Total	**3.5600e-003**	**2.8200e-003**	**0.0383**	**1.1000e-004**	**0.0123**	**8.0000e-005**	**0.0124**	**3.2600e-003**	**7.0000e-005**	**3.3300e-003**	**0.0000**	**9.8916**	**9.8916**	**2.6000e-004**	**2.5000e-004**	**9.9739**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.7500e-003	0.0764	0.1094	1.7000e-004		3.8300e-003	3.8300e-003		3.5200e-003	3.5200e-003	0.0000	15.0202	15.0202	4.8600e-003	0.0000	15.1416
Paving	2.7500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0105**	**0.0764**	**0.1094**	**1.7000e-004**		**3.8300e-003**	**3.8300e-003**		**3.5200e-003**	**3.5200e-003**	**0.0000**	**15.0202**	**15.0202**	**4.8600e-003**	**0.0000**	**15.1416**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.6000e-004	2.8000e-004	3.8400e-003	1.0000e-005	1.2300e-003	1.0000e-005	1.2400e-003	3.3000e-004	1.0000e-005	3.3000e-004	0.0000	0.9936	0.9936	3.0000e-005	3.0000e-005	1.0018
Total	**3.6000e-004**	**2.8000e-004**	**3.8400e-003**	**1.0000e-005**	**1.2300e-003**	**1.0000e-005**	**1.2400e-003**	**3.3000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**0.9936**	**0.9936**	**3.0000e-005**	**3.0000e-005**	**1.0018**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Paving - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.9800e-003	0.1509	0.1297	1.7000e-004		5.0000e-003	5.0000e-003		5.0000e-003	5.0000e-003	0.0000	15.0201	15.0201	4.8600e-003	0.0000	15.1416
Paving	2.7500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.7300e-003**	**0.1509**	**0.1297**	**1.7000e-004**		**5.0000e-003**	**5.0000e-003**		**5.0000e-003**	**5.0000e-003**	**0.0000**	**15.0201**	**15.0201**	**4.8600e-003**	**0.0000**	**15.1416**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.6000e-004	2.8000e-004	3.8400e-003	1.0000e-005	1.2300e-003	1.0000e-005	1.2400e-003	3.3000e-004	1.0000e-005	3.3000e-004	0.0000	0.9936	0.9936	3.0000e-005	3.0000e-005	1.0018
Total	**3.6000e-004**	**2.8000e-004**	**3.8400e-003**	**1.0000e-005**	**1.2300e-003**	**1.0000e-005**	**1.2400e-003**	**3.3000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**0.9936**	**0.9936**	**3.0000e-005**	**3.0000e-005**	**1.0018**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2451	1.5439	2.8109	0.0111	0.7394	0.0112	0.7507	0.1998	0.0106	0.2104	0.0000	1,070.5717	1,070.5717	0.0559	0.1067	1,103.7662
Unmitigated	0.2451	1.5439	2.8109	0.0111	0.7394	0.0112	0.7507	0.1998	0.0106	0.2104	0.0000	1,070.5717	1,070.5717	0.0559	0.1067	1,103.7662

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Refrigerated Warehouse-No Rail	31.99	31.99	31.99	190,926	190,926
Unrefrigerated Warehouse-No Rail	285.91	285.91	285.91	1,706,303	1,706,303
Total	317.90	317.90	317.90	1,897,229	1,897,229

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Refrigerated Warehouse-No	25.00	8.40	6.90	59.00	0.00	41.00	92	5	3

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Unrefrigerated Warehouse-No	25.00	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.542464	0.063735	0.188241	0.126899	0.023249	0.006239	0.010717	0.008079	0.000923	0.000604	0.024795	0.000702	0.003352
Parking Lot	0.542464	0.063735	0.188241	0.126899	0.023249	0.006239	0.010717	0.008079	0.000923	0.000604	0.024795	0.000702	0.003352
Refrigerated Warehouse-No Rail	0.250990	0.063735	0.188241	0.126899	0.023249	0.006239	0.062500	0.250000	0.000000	0.000000	0.024795	0.000000	0.003352
Unrefrigerated Warehouse-No Rail	0.336290	0.063735	0.188241	0.126899	0.023249	0.006239	0.055900	0.171300	0.000000	0.000000	0.024795	0.000000	0.003352

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	174.3657	174.3657	0.0147	1.7800e-003	175.2652
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	174.3657	174.3657	0.0147	1.7800e-003	175.2652
NaturalGas Mitigated	8.8000e-004	7.9800e-003	6.7000e-003	5.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	8.6824	8.6824	1.7000e-004	1.6000e-004	8.7340
NaturalGas Unmitigated	8.8000e-004	7.9800e-003	6.7000e-003	5.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	8.6824	8.6824	1.7000e-004	1.6000e-004	8.7340

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	18944.5	1.0000e-004	9.3000e-004	7.8000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	1.0110	1.0110	2.0000e-005	2.0000e-005	1.0170
Unrefrigerated Warehouse-No Rail	143758	7.8000e-004	7.0500e-003	5.9200e-003	4.0000e-005		5.4000e-004	5.4000e-004		5.4000e-004	5.4000e-004	0.0000	7.6715	7.6715	1.5000e-004	1.4000e-004	7.7170
Total		**8.8000e-004**	**7.9800e-003**	**6.7000e-003**	**5.0000e-005**		**6.1000e-004**	**6.1000e-004**		**6.1000e-004**	**6.1000e-004**	**0.0000**	**8.6824**	**8.6824**	**1.7000e-004**	**1.6000e-004**	**8.7340**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	18944.5	1.0000e-004	9.3000e-004	7.8000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	1.0110	1.0110	2.0000e-005	2.0000e-005	1.0170
Unrefrigerated Warehouse-No Rail	143758	7.8000e-004	7.0500e-003	5.9200e-003	4.0000e-005		5.4000e-004	5.4000e-004		5.4000e-004	5.4000e-004	0.0000	7.6715	7.6715	1.5000e-004	1.4000e-004	7.7170
Total		**8.8000e-004**	**7.9800e-003**	**6.7000e-003**	**5.0000e-005**		**6.1000e-004**	**6.1000e-004**		**6.1000e-004**	**6.1000e-004**	**0.0000**	**8.6824**	**8.6824**	**1.7000e-004**	**1.6000e-004**	**8.7340**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	32620	5.7850	4.9000e-004	6.0000e-005	5.8149
Refrigerated Warehouse-No Rail	310355	55.0401	4.6500e-003	5.6000e-004	55.3240
Unrefrigerated Warehouse-No Rail	640223	113.5407	9.5800e-003	1.1600e-003	114.1264
Total		**174.3657**	**0.0147**	**1.7800e-003**	**175.2653**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	32620	5.7850	4.9000e-004	6.0000e-005	5.8149
Refrigerated Warehouse-No Rail	310355	55.0401	4.6500e-003	5.6000e-004	55.3240
Unrefrigerated Warehouse-No Rail	640223	113.5407	9.5800e-003	1.1600e-003	114.1264
Total		**174.3657**	**0.0147**	**1.7800e-003**	**175.2653**

6.0 Area Detail

6.1 Mitigation Measures Area

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.7656	5.0000e-005	5.3500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0104	0.0104	3.0000e-005	0.0000	0.0111
Unmitigated	0.7656	5.0000e-005	5.3500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0104	0.0104	3.0000e-005	0.0000	0.0111

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0874					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6777					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.9000e-004	5.0000e-005	5.3500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0104	0.0104	3.0000e-005	0.0000	0.0111
Total	**0.7656**	**5.0000e-005**	**5.3500e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0104**	**0.0104**	**3.0000e-005**	**0.0000**	**0.0111**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0874					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6777					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.9000e-004	5.0000e-005	5.3500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0104	0.0104	3.0000e-005	0.0000	0.0111
Total	**0.7656**	**5.0000e-005**	**5.3500e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0104**	**0.0104**	**3.0000e-005**	**0.0000**	**0.0111**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	93.0131	1.1270	0.0273	129.3189
Unmitigated	115.7606	1.4087	0.0341	161.1402

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 1.47744	2.9110	2.5000e-004	3.0000e-005	2.9260
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	4.30125 / 0	11.2971	0.1410	3.4100e-003	15.8385
Unrefrigerated Warehouse-No Rail	38.665 / 0	101.5525	1.2674	0.0307	142.3758
Total		**115.7606**	**1.4087**	**0.0341**	**161.1402**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 1.38731	2.7334	2.3000e-004	3.0000e-005	2.7475
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	3.441 / 0	9.0377	0.1128	2.7300e-003	12.6708
Unrefrigerated Warehouse-No Rail	30.932 / 0	81.2420	1.0140	0.0245	113.9006
Total		**93.0131**	**1.1270**	**0.0273**	**129.3189**

8.0 Waste Detail

8.1 Mitigation Measures Waste

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	35.4747	2.0965	0.0000	87.8871
Unmitigated	35.4747	2.0965	0.0000	87.8871

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.11	0.0223	1.3200e-003	0.0000	0.0553
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	17.48	3.5483	0.2097	0.0000	8.7907
Unrefrigerated Warehouse-No Rail	157.17	31.9041	1.8855	0.0000	79.0410
Total		**35.4747**	**2.0965**	**0.0000**	**87.8871**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.11	0.0223	1.3200e-003	0.0000	0.0553
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	17.48	3.5483	0.2097	0.0000	8.7907
Unrefrigerated Warehouse-No Rail	157.17	31.9041	1.8855	0.0000	79.0410
Total		**35.4747**	**2.0965**	**0.0000**	**87.8871**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Equipment Type	Number

11.0 Vegetation

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

12300 Lakeland Warehouse Project

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Refrigerated Warehouse-No Rail	18.60	1000sqft	0.60	18,573.00	0
Unrefrigerated Warehouse-No Rail	167.20	1000sqft	4.51	167,160.00	0
Parking Lot	233.00	Space	2.10	93,200.00	0
City Park	1.24	Acre	1.24	53,927.28	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Assuming 10% of building square footage is refrigerated and 90% is unrefrigerated. Total project site is 8.45 acres.

Construction Phase - Assumming overlap of contrsuction and architectual coating. Construction starts the first quarter of 2023 and occurs for 9 months

Demolition - Project will demolish existing buildings in project site.

Vehicle Trips - project trip generation for 318 trips and operational trip length of 25

Construction Off-road Equipment Mitigation - assuming use of tier 2 construction

Water Mitigation - energy efficiency water fixtures and drought tolerant landscaping

Fleet Mix - 75 truck trips and 243 auto trips

Grading -

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstructionPhase	NumDays	20.00	80.00
tblConstructionPhase	NumDays	230.00	160.00
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	20.00	15.00
tblConstructionPhase	NumDays	20.00	15.00
tblFleetMix	HHD	8.0790e-003	0.25
tblFleetMix	HHD	8.0790e-003	0.17
tblFleetMix	LDA	0.54	0.25
tblFleetMix	LDA	0.54	0.34
tblFleetMix	MHD	0.01	0.06
tblFleetMix	MHD	0.01	0.06
tblFleetMix	OBUS	9.2300e-004	0.00
tblFleetMix	OBUS	9.2300e-004	0.00
tblFleetMix	SBUS	7.0200e-004	0.00
tblFleetMix	SBUS	7.0200e-004	0.00
tblFleetMix	UBUS	6.0400e-004	0.00
tblFleetMix	UBUS	6.0400e-004	0.00
tblLandUse	LandUseSquareFeet	18,600.00	18,573.00
tblLandUse	LandUseSquareFeet	167,200.00	167,160.00
tblLandUse	LandUseSquareFeet	54,014.40	53,927.28
tblLandUse	LotAcreage	0.43	0.60
tblLandUse	LotAcreage	3.84	4.51
tblVehicleTrips	CW_TL	16.60	25.00
tblVehicleTrips	CW_TL	16.60	25.00
tblVehicleTrips	ST_TR	1.96	0.00
tblVehicleTrips	ST_TR	2.12	1.72
tblVehicleTrips	ST_TR	1.74	1.71
tblVehicleTrips	SU_TR	2.19	0.00
tblVehicleTrips	SU_TR	2.12	1.72

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	SU_TR	1.74	1.71
tblVehicleTrips	WD_TR	0.78	0.00
tblVehicleTrips	WD_TR	2.12	1.72
tblVehicleTrips	WD_TR	1.74	1.71

2.0 Emissions Summary

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	24.2116	27.5644	24.9608	0.0583	19.8582	1.2672	21.1254	10.1558	1.1659	11.3217	0.0000	5,871.8425	5,871.8425	1.1971	0.3168	5,995.2859
Maximum	**24.2116**	**27.5644**	**24.9608**	**0.0583**	**19.8582**	**1.2672**	**21.1254**	**10.1558**	**1.1659**	**11.3217**	**0.0000**	**5,871.8425**	**5,871.8425**	**1.1971**	**0.3168**	**5,995.2859**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	23.6419	36.7034	26.6119	0.0583	9.0469	1.0206	9.9942	4.5995	1.0192	5.5468	0.0000	5,871.8424	5,871.8424	1.1971	0.3168	5,995.2859
Maximum	**23.6419**	**36.7034**	**26.6119**	**0.0583**	**9.0469**	**1.0206**	**9.9942**	**4.5995**	**1.0192**	**5.5468**	**0.0000**	**5,871.8424**	**5,871.8424**	**1.1971**	**0.3168**	**5,995.2859**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**2.35**	**-33.16**	**-6.61**	**0.00**	**54.44**	**19.46**	**52.69**	**54.71**	**12.58**	**51.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.1961	3.9000e-004	0.0428	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0919	0.0919	2.4000e-004		0.0979
Energy	4.8100e-003	0.0437	0.0367	2.6000e-004		3.3200e-003	3.3200e-003		3.3200e-003	3.3200e-003		52.4422	52.4422	1.0100e-003	9.6000e-004	52.7539
Mobile	1.3733	7.9989	15.7178	0.0620	4.1407	0.0618	4.2024	1.1167	0.0585	1.1752		6,584.8894	6,584.8894	0.3360	0.6402	6,784.0632
Total	**5.5742**	**8.0430**	**15.7973**	**0.0622**	**4.1407**	**0.0652**	**4.2059**	**1.1167**	**0.0620**	**1.1786**		**6,637.4236**	**6,637.4236**	**0.3372**	**0.6411**	**6,836.9150**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.1961	3.9000e-004	0.0428	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0919	0.0919	2.4000e-004		0.0979
Energy	4.8100e-003	0.0437	0.0367	2.6000e-004		3.3200e-003	3.3200e-003		3.3200e-003	3.3200e-003		52.4422	52.4422	1.0100e-003	9.6000e-004	52.7539
Mobile	1.3733	7.9989	15.7178	0.0620	4.1407	0.0618	4.2024	1.1167	0.0585	1.1752		6,584.8894	6,584.8894	0.3360	0.6402	6,784.0632
Total	**5.5742**	**8.0430**	**15.7973**	**0.0622**	**4.1407**	**0.0652**	**4.2059**	**1.1167**	**0.0620**	**1.1786**		**6,637.4236**	**6,637.4236**	**0.3372**	**0.6411**	**6,836.9150**

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/6/2023	3/17/2023	5	10	
2	Site Preparation	Site Preparation	3/20/2023	3/31/2023	5	10	
3	Grading	Grading	4/3/2023	4/21/2023	5	15	
4	Building Construction	Building Construction	4/24/2023	12/1/2023	5	160	
5	Architectural Coating	Architectural Coating	8/21/2023	12/8/2023	5	80	
6	Paving	Paving	12/11/2023	12/29/2023	5	15	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 15

Acres of Paving: 2.1

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 278,600; Non-Residential Outdoor: 92,867; Striped Parking Area: 5,592 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	307.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	140.00	55.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	28.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.6483	0.0000	6.6483	1.0066	0.0000	1.0066			0.0000			0.0000
Off-Road	2.2691	21.4844	19.6434	0.0388		0.9975	0.9975		0.9280	0.9280		3,746.9840	3,746.9840	1.0494		3,773.2183
Total	**2.2691**	**21.4844**	**19.6434**	**0.0388**	**6.6483**	**0.9975**	**7.6459**	**1.0066**	**0.9280**	**1.9346**		**3,746.9840**	**3,746.9840**	**1.0494**		**3,773.2183**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0666	4.0060	1.0692	0.0180	0.5374	0.0253	0.5627	0.1473	0.0242	0.1715		1,972.9665	1,972.9665	0.1087	0.3133	2,069.0495
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0480	0.0335	0.5436	1.4800e-003	0.1677	1.0100e-003	0.1687	0.0445	9.3000e-004	0.0454		151.8919	151.8919	3.7800e-003	3.4600e-003	153.0181
Total	**0.1146**	**4.0395**	**1.6128**	**0.0194**	**0.7050**	**0.0263**	**0.7313**	**0.1918**	**0.0251**	**0.2169**		**2,124.8584**	**2,124.8584**	**0.1125**	**0.3168**	**2,222.0676**

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.9918	0.0000	2.9918	0.4530	0.0000	0.4530			0.0000			0.0000
Off-Road	1.2617	32.6638	24.6739	0.0388		0.9135	0.9135		0.9135	0.9135	0.0000	3,746.9840	3,746.9840	1.0494		3,773.2183
Total	**1.2617**	**32.6638**	**24.6739**	**0.0388**	**2.9918**	**0.9135**	**3.9053**	**0.4530**	**0.9135**	**1.3665**	**0.0000**	**3,746.9840**	**3,746.9840**	**1.0494**		**3,773.2183**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0666	4.0060	1.0692	0.0180	0.5374	0.0253	0.5627	0.1473	0.0242	0.1715		1,972.9665	1,972.9665	0.1087	0.3133	2,069.0495
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0480	0.0335	0.5436	1.4800e-003	0.1677	1.0100e-003	0.1687	0.0445	9.3000e-004	0.0454		151.8919	151.8919	3.7800e-003	3.4600e-003	153.0181
Total	**0.1146**	**4.0395**	**1.6128**	**0.0194**	**0.7050**	**0.0263**	**0.7313**	**0.1918**	**0.0251**	**0.2169**		**2,124.8584**	**2,124.8584**	**0.1125**	**0.3168**	**2,222.0676**

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647		3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**19.6570**	**1.2660**	**20.9230**	**10.1025**	**1.1647**	**11.2672**		**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0576	0.0402	0.6523	1.7800e-003	0.2012	1.2100e-003	0.2024	0.0534	1.1200e-003	0.0545		182.2703	182.2703	4.5400e-003	4.1500e-003	183.6218
Total	**0.0576**	**0.0402**	**0.6523**	**1.7800e-003**	**0.2012**	**1.2100e-003**	**0.2024**	**0.0534**	**1.1200e-003**	**0.0545**		**182.2703**	**182.2703**	**4.5400e-003**	**4.1500e-003**	**183.6218**

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.8457	0.0000	8.8457	4.5461	0.0000	4.5461			0.0000			0.0000
Off-Road	1.2097	33.7214	22.9600	0.0381		0.9462	0.9462		0.9462	0.9462	0.0000	3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**1.2097**	**33.7214**	**22.9600**	**0.0381**	**8.8457**	**0.9462**	**9.7918**	**4.5461**	**0.9462**	**5.4923**	**0.0000**	**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0576	0.0402	0.6523	1.7800e-003	0.2012	1.2100e-003	0.2024	0.0534	1.1200e-003	0.0545		182.2703	182.2703	4.5400e-003	4.1500e-003	183.6218
Total	**0.0576**	**0.0402**	**0.6523**	**1.7800e-003**	**0.2012**	**1.2100e-003**	**0.2024**	**0.0534**	**1.1200e-003**	**0.0545**		**182.2703**	**182.2703**	**4.5400e-003**	**4.1500e-003**	**183.6218**

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129		2,872.6910	2,872.6910	0.9291		2,895.9182
Total	**1.7109**	**17.9359**	**14.7507**	**0.0297**	**7.0826**	**0.7749**	**7.8575**	**3.4247**	**0.7129**	**4.1377**		**2,872.6910**	**2,872.6910**	**0.9291**		**2,895.9182**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0480	0.0335	0.5436	1.4800e-003	0.1677	1.0100e-003	0.1687	0.0445	9.3000e-004	0.0454		151.8919	151.8919	3.7800e-003	3.4600e-003	153.0181
Total	**0.0480**	**0.0335**	**0.5436**	**1.4800e-003**	**0.1677**	**1.0100e-003**	**0.1687**	**0.0445**	**9.3000e-004**	**0.0454**		**151.8919**	**151.8919**	**3.7800e-003**	**3.4600e-003**	**153.0181**

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.1872	0.0000	3.1872	1.5411	0.0000	1.5411			0.0000			0.0000
Off-Road	1.0093	26.2791	18.9906	0.0297		0.7725	0.7725		0.7725	0.7725	0.0000	2,872.6910	2,872.6910	0.9291		2,895.9182
Total	**1.0093**	**26.2791**	**18.9906**	**0.0297**	**3.1872**	**0.7725**	**3.9596**	**1.5411**	**0.7725**	**2.3136**	**0.0000**	**2,872.6910**	**2,872.6910**	**0.9291**		**2,895.9182**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0480	0.0335	0.5436	1.4800e-003	0.1677	1.0100e-003	0.1687	0.0445	9.3000e-004	0.0454		151.8919	151.8919	3.7800e-003	3.4600e-003	153.0181
Total	**0.0480**	**0.0335**	**0.5436**	**1.4800e-003**	**0.1677**	**1.0100e-003**	**0.1687**	**0.0445**	**9.3000e-004**	**0.0454**		**151.8919**	**151.8919**	**3.7800e-003**	**3.4600e-003**	**153.0181**

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0633	2.1111	0.8179	0.0102	0.3523	0.0106	0.3629	0.1014	0.0102	0.1116		1,101.5536	1,101.5536	0.0369	0.1584	1,149.6711
Worker	0.4483	0.3126	5.0732	0.0139	1.5649	9.4400e-003	1.5743	0.4150	8.6900e-003	0.4237		1,417.6579	1,417.6579	0.0353	0.0323	1,428.1692
Total	**0.5116**	**2.4236**	**5.8911**	**0.0241**	**1.9172**	**0.0201**	**1.9372**	**0.5165**	**0.0188**	**0.5353**		**2,519.2115**	**2,519.2115**	**0.0722**	**0.1907**	**2,577.8403**

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0809	23.5544	17.8738	0.0269		0.9036	0.9036		0.9036	0.9036	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.0809**	**23.5544**	**17.8738**	**0.0269**		**0.9036**	**0.9036**		**0.9036**	**0.9036**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0633	2.1111	0.8179	0.0102	0.3523	0.0106	0.3629	0.1014	0.0102	0.1116		1,101.5536	1,101.5536	0.0369	0.1584	1,149.6711
Worker	0.4483	0.3126	5.0732	0.0139	1.5649	9.4400e-003	1.5743	0.4150	8.6900e-003	0.4237		1,417.6579	1,417.6579	0.0353	0.0323	1,428.1692
Total	**0.5116**	**2.4236**	**5.8911**	**0.0241**	**1.9172**	**0.0201**	**1.9372**	**0.5165**	**0.0188**	**0.5353**		**2,519.2115**	**2,519.2115**	**0.0722**	**0.1907**	**2,577.8403**

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	21.8459					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**22.0375**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0897	0.0625	1.0146	2.7700e-003	0.3130	1.8900e-003	0.3149	0.0830	1.7400e-003	0.0847		283.5316	283.5316	7.0600e-003	6.4600e-003	285.6338
Total	**0.0897**	**0.0625**	**1.0146**	**2.7700e-003**	**0.3130**	**1.8900e-003**	**0.3149**	**0.0830**	**1.7400e-003**	**0.0847**		**283.5316**	**283.5316**	**7.0600e-003**	**6.4600e-003**	**285.6338**

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	21.8459					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1139	2.3524	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**21.9598**	**2.3524**	**1.8324**	**2.9700e-003**		**0.0951**	**0.0951**		**0.0951**	**0.0951**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0897	0.0625	1.0146	2.7700e-003	0.3130	1.8900e-003	0.3149	0.0830	1.7400e-003	0.0847		283.5316	283.5316	7.0600e-003	6.4600e-003	285.6338
Total	**0.0897**	**0.0625**	**1.0146**	**2.7700e-003**	**0.3130**	**1.8900e-003**	**0.3149**	**0.0830**	**1.7400e-003**	**0.0847**		**283.5316**	**283.5316**	**7.0600e-003**	**6.4600e-003**	**285.6338**

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.3668					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3995**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**		**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0480	0.0335	0.5436	1.4800e-003	0.1677	1.0100e-003	0.1687	0.0445	9.3000e-004	0.0454		151.8919	151.8919	3.7800e-003	3.4600e-003	153.0181
Total	**0.0480**	**0.0335**	**0.5436**	**1.4800e-003**	**0.1677**	**1.0100e-003**	**0.1687**	**0.0445**	**9.3000e-004**	**0.0454**		**151.8919**	**151.8919**	**3.7800e-003**	**3.4600e-003**	**153.0181**

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Paving - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9311	20.1146	17.2957	0.0228		0.6670	0.6670		0.6670	0.6670	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.3668					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2979**	**20.1146**	**17.2957**	**0.0228**		**0.6670**	**0.6670**		**0.6670**	**0.6670**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0480	0.0335	0.5436	1.4800e-003	0.1677	1.0100e-003	0.1687	0.0445	9.3000e-004	0.0454		151.8919	151.8919	3.7800e-003	3.4600e-003	153.0181
Total	**0.0480**	**0.0335**	**0.5436**	**1.4800e-003**	**0.1677**	**1.0100e-003**	**0.1687**	**0.0445**	**9.3000e-004**	**0.0454**		**151.8919**	**151.8919**	**3.7800e-003**	**3.4600e-003**	**153.0181**

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.3733	7.9989	15.7178	0.0620	4.1407	0.0618	4.2024	1.1167	0.0585	1.1752		6,584.8894	6,584.8894	0.3360	0.6402	6,784.0632
Unmitigated	1.3733	7.9989	15.7178	0.0620	4.1407	0.0618	4.2024	1.1167	0.0585	1.1752		6,584.8894	6,584.8894	0.3360	0.6402	6,784.0632

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Refrigerated Warehouse-No Rail	31.99	31.99	31.99	190,926	190,926
Unrefrigerated Warehouse-No Rail	285.91	285.91	285.91	1,706,303	1,706,303
Total	317.90	317.90	317.90	1,897,229	1,897,229

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Refrigerated Warehouse-No	25.00	8.40	6.90	59.00	0.00	41.00	92	5	3

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Unrefrigerated Warehouse-No	25.00	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.542464	0.063735	0.188241	0.126899	0.023249	0.006239	0.010717	0.008079	0.000923	0.000604	0.024795	0.000702	0.003352
Parking Lot	0.542464	0.063735	0.188241	0.126899	0.023249	0.006239	0.010717	0.008079	0.000923	0.000604	0.024795	0.000702	0.003352
Refrigerated Warehouse-No Rail	0.250990	0.063735	0.188241	0.126899	0.023249	0.006239	0.062500	0.250000	0.000000	0.000000	0.024795	0.000000	0.003352
Unrefrigerated Warehouse-No Rail	0.336290	0.063735	0.188241	0.126899	0.023249	0.006239	0.055900	0.171300	0.000000	0.000000	0.024795	0.000000	0.003352

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	4.8100e-003	0.0437	0.0367	2.6000e-004		3.3200e-003	3.3200e-003		3.3200e-003	3.3200e-003		52.4422	52.4422	1.0100e-003	9.6000e-004	52.7539
NaturalGas Unmitigated	4.8100e-003	0.0437	0.0367	2.6000e-004		3.3200e-003	3.3200e-003		3.3200e-003	3.3200e-003		52.4422	52.4422	1.0100e-003	9.6000e-004	52.7539

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	51.9026	5.6000e-004	5.0900e-003	4.2700e-003	3.0000e-005		3.9000e-004	3.9000e-004		3.9000e-004	3.9000e-004		6.1062	6.1062	1.2000e-004	1.1000e-004	6.1425
Unrefrigerated Warehouse-No Rail	393.856	4.2500e-003	0.0386	0.0324	2.3000e-004		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003		46.3361	46.3361	8.9000e-004	8.5000e-004	46.6114
Total		**4.8100e-003**	**0.0437**	**0.0367**	**2.6000e-004**		**3.3200e-003**	**3.3200e-003**		**3.3200e-003**	**3.3200e-003**		**52.4422**	**52.4422**	**1.0100e-003**	**9.6000e-004**	**52.7539**

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	0.0519026	5.6000e-004	5.0900e-003	4.2700e-003	3.0000e-005		3.9000e-004	3.9000e-004		3.9000e-004	3.9000e-004		6.1062	6.1062	1.2000e-004	1.1000e-004	6.1425
Unrefrigerated Warehouse-No Rail	0.393856	4.2500e-003	0.0386	0.0324	2.3000e-004		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003		46.3361	46.3361	8.9000e-004	8.5000e-004	46.6114
Total		**4.8100e-003**	**0.0437**	**0.0367**	**2.6000e-004**		**3.3200e-003**	**3.3200e-003**		**3.3200e-003**	**3.3200e-003**		**52.4422**	**52.4422**	**1.0100e-003**	**9.6000e-004**	**52.7539**

6.0 Area Detail

6.1 Mitigation Measures Area

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.1961	3.9000e-004	0.0428	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0919	0.0919	2.4000e-004		0.0979
Unmitigated	4.1961	3.9000e-004	0.0428	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0919	0.0919	2.4000e-004		0.0979

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4788					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.7133					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.9500e-003	3.9000e-004	0.0428	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0919	0.0919	2.4000e-004		0.0979
Total	**4.1961**	**3.9000e-004**	**0.0428**	**0.0000**		**1.5000e-004**	**1.5000e-004**		**1.5000e-004**	**1.5000e-004**		**0.0919**	**0.0919**	**2.4000e-004**		**0.0979**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4788					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.7133					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.9500e-003	3.9000e-004	0.0428	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0919	0.0919	2.4000e-004		0.0979
Total	**4.1961**	**3.9000e-004**	**0.0428**	**0.0000**		**1.5000e-004**	**1.5000e-004**		**1.5000e-004**	**1.5000e-004**		**0.0919**	**0.0919**	**2.4000e-004**		**0.0979**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

12300 Lakeland Warehouse Project

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Refrigerated Warehouse-No Rail	18.60	1000sqft	0.60	18,573.00	0
Unrefrigerated Warehouse-No Rail	167.20	1000sqft	4.51	167,160.00	0
Parking Lot	233.00	Space	2.10	93,200.00	0
City Park	1.24	Acre	1.24	53,927.28	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Assuming 10% of building square footage is refrigerated and 90% is unrefrigerated. Total project site is 8.45 acres.

Construction Phase - Assumming overlap of contrsuction and architectual coating. Construction starts the first quarter of 2023 and occurs for 9 months

Demolition - Project will demolish existing buildings in project site.

Vehicle Trips - project trip generation for 318 trips and operational trip length of 25

Construction Off-road Equipment Mitigation - assuming use of tier 2 construction

Water Mitigation - energy efficiency water fixtures and drought tolerant landscaping

Fleet Mix - 75 truck trips and 243 auto trips

Grading -

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstructionPhase	NumDays	20.00	80.00
tblConstructionPhase	NumDays	230.00	160.00
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	20.00	15.00
tblConstructionPhase	NumDays	20.00	15.00
tblFleetMix	HHD	8.0790e-003	0.25
tblFleetMix	HHD	8.0790e-003	0.17
tblFleetMix	LDA	0.54	0.25
tblFleetMix	LDA	0.54	0.34
tblFleetMix	MHD	0.01	0.06
tblFleetMix	MHD	0.01	0.06
tblFleetMix	OBUS	9.2300e-004	0.00
tblFleetMix	OBUS	9.2300e-004	0.00
tblFleetMix	SBUS	7.0200e-004	0.00
tblFleetMix	SBUS	7.0200e-004	0.00
tblFleetMix	UBUS	6.0400e-004	0.00
tblFleetMix	UBUS	6.0400e-004	0.00
tblLandUse	LandUseSquareFeet	18,600.00	18,573.00
tblLandUse	LandUseSquareFeet	167,200.00	167,160.00
tblLandUse	LandUseSquareFeet	54,014.40	53,927.28
tblLandUse	LotAcreage	0.43	0.60
tblLandUse	LotAcreage	3.84	4.51
tblVehicleTrips	CW_TL	16.60	25.00
tblVehicleTrips	CW_TL	16.60	25.00
tblVehicleTrips	ST_TR	1.96	0.00
tblVehicleTrips	ST_TR	2.12	1.72
tblVehicleTrips	ST_TR	1.74	1.71
tblVehicleTrips	SU_TR	2.19	0.00
tblVehicleTrips	SU_TR	2.12	1.72

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	SU_TR	1.74	1.71
tblVehicleTrips	WD_TR	0.78	0.00
tblVehicleTrips	WD_TR	2.12	1.72
tblVehicleTrips	WD_TR	1.74	1.71

2.0 Emissions Summary

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	24.2494	27.5686	24.4944	0.0582	19.8582	1.2672	21.1254	10.1558	1.1659	11.3217	0.0000	5,865.9142	5,865.9142	1.1972	0.3173	5,989.5243
Maximum	**24.2494**	**27.5686**	**24.4944**	**0.0582**	**19.8582**	**1.2672**	**21.1254**	**10.1558**	**1.1659**	**11.3217**	**0.0000**	**5,865.9142**	**5,865.9142**	**1.1972**	**0.3173**	**5,989.5243**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	23.6798	36.8835	26.2574	0.0582	9.0469	1.0207	9.9942	4.5995	1.0193	5.5468	0.0000	5,865.9141	5,865.9141	1.1972	0.3173	5,989.5243
Maximum	**23.6798**	**36.8835**	**26.2574**	**0.0582**	**9.0469**	**1.0207**	**9.9942**	**4.5995**	**1.0193**	**5.5468**	**0.0000**	**5,865.9141**	**5,865.9141**	**1.1972**	**0.3173**	**5,989.5243**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**2.35**	**-33.79**	**-7.20**	**0.00**	**54.44**	**19.46**	**52.69**	**54.71**	**12.57**	**51.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.1961	3.9000e-004	0.0428	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0919	0.0919	2.4000e-004		0.0979
Energy	4.8100e-003	0.0437	0.0367	2.6000e-004		3.3200e-003	3.3200e-003		3.3200e-003	3.3200e-003		52.4422	52.4422	1.0100e-003	9.6000e-004	52.7539
Mobile	1.3566	8.4055	15.3177	0.0608	4.1407	0.0619	4.2025	1.1167	0.0586	1.1753		6,459.2865	6,459.2865	0.3389	0.6461	6,660.2983
Total	**5.5575**	**8.4496**	**15.3972**	**0.0610**	**4.1407**	**0.0654**	**4.2060**	**1.1167**	**0.0621**	**1.1787**		**6,511.8206**	**6,511.8206**	**0.3401**	**0.6471**	**6,713.1501**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.1961	3.9000e-004	0.0428	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0919	0.0919	2.4000e-004		0.0979
Energy	4.8100e-003	0.0437	0.0367	2.6000e-004		3.3200e-003	3.3200e-003		3.3200e-003	3.3200e-003		52.4422	52.4422	1.0100e-003	9.6000e-004	52.7539
Mobile	1.3566	8.4055	15.3177	0.0608	4.1407	0.0619	4.2025	1.1167	0.0586	1.1753		6,459.2865	6,459.2865	0.3389	0.6461	6,660.2983
Total	**5.5575**	**8.4496**	**15.3972**	**0.0610**	**4.1407**	**0.0654**	**4.2060**	**1.1167**	**0.0621**	**1.1787**		**6,511.8206**	**6,511.8206**	**0.3401**	**0.6471**	**6,713.1501**

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/6/2023	3/17/2023	5	10	
2	Site Preparation	Site Preparation	3/20/2023	3/31/2023	5	10	
3	Grading	Grading	4/3/2023	4/21/2023	5	15	
4	Building Construction	Building Construction	4/24/2023	12/1/2023	5	160	
5	Architectural Coating	Architectural Coating	8/21/2023	12/8/2023	5	80	
6	Paving	Paving	12/11/2023	12/29/2023	5	15	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 15

Acres of Paving: 2.1

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 278,600; Non-Residential Outdoor: 92,867; Striped Parking Area: 5,592 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	307.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	140.00	55.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	28.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.6483	0.0000	6.6483	1.0066	0.0000	1.0066			0.0000			0.0000
Off-Road	2.2691	21.4844	19.6434	0.0388		0.9975	0.9975		0.9280	0.9280		3,746.9840	3,746.9840	1.0494		3,773.2183
Total	**2.2691**	**21.4844**	**19.6434**	**0.0388**	**6.6483**	**0.9975**	**7.6459**	**1.0066**	**0.9280**	**1.9346**		**3,746.9840**	**3,746.9840**	**1.0494**		**3,773.2183**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0623	4.1826	1.0839	0.0180	0.5374	0.0253	0.5627	0.1473	0.0242	0.1716		1,975.0461	1,975.0461	0.1085	0.3136	2,071.2242
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0516	0.0370	0.4996	1.4100e-003	0.1677	1.0100e-003	0.1687	0.0445	9.3000e-004	0.0454		143.8840	143.8840	3.8300e-003	3.7000e-003	145.0818
Total	**0.1139**	**4.2196**	**1.5836**	**0.0194**	**0.7050**	**0.0263**	**0.7314**	**0.1918**	**0.0252**	**0.2170**		**2,118.9301**	**2,118.9301**	**0.1123**	**0.3173**	**2,216.3061**

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.9918	0.0000	2.9918	0.4530	0.0000	0.4530			0.0000			0.0000
Off-Road	1.2617	32.6638	24.6739	0.0388		0.9135	0.9135		0.9135	0.9135	0.0000	3,746.9840	3,746.9840	1.0494		3,773.2183
Total	**1.2617**	**32.6638**	**24.6739**	**0.0388**	**2.9918**	**0.9135**	**3.9053**	**0.4530**	**0.9135**	**1.3665**	**0.0000**	**3,746.9840**	**3,746.9840**	**1.0494**		**3,773.2183**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0623	4.1826	1.0839	0.0180	0.5374	0.0253	0.5627	0.1473	0.0242	0.1716		1,975.0461	1,975.0461	0.1085	0.3136	2,071.2242
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0516	0.0370	0.4996	1.4100e-003	0.1677	1.0100e-003	0.1687	0.0445	9.3000e-004	0.0454		143.8840	143.8840	3.8300e-003	3.7000e-003	145.0818
Total	**0.1139**	**4.2196**	**1.5836**	**0.0194**	**0.7050**	**0.0263**	**0.7314**	**0.1918**	**0.0252**	**0.2170**		**2,118.9301**	**2,118.9301**	**0.1123**	**0.3173**	**2,216.3061**

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647		3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**19.6570**	**1.2660**	**20.9230**	**10.1025**	**1.1647**	**11.2672**		**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0619	0.0444	0.5996	1.6900e-003	0.2012	1.2100e-003	0.2024	0.0534	1.1200e-003	0.0545		172.6608	172.6608	4.6000e-003	4.4400e-003	174.0982
Total	**0.0619**	**0.0444**	**0.5996**	**1.6900e-003**	**0.2012**	**1.2100e-003**	**0.2024**	**0.0534**	**1.1200e-003**	**0.0545**		**172.6608**	**172.6608**	**4.6000e-003**	**4.4400e-003**	**174.0982**

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.8457	0.0000	8.8457	4.5461	0.0000	4.5461			0.0000			0.0000
Off-Road	1.2097	33.7214	22.9600	0.0381		0.9462	0.9462		0.9462	0.9462	0.0000	3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**1.2097**	**33.7214**	**22.9600**	**0.0381**	**8.8457**	**0.9462**	**9.7918**	**4.5461**	**0.9462**	**5.4923**	**0.0000**	**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0619	0.0444	0.5996	1.6900e-003	0.2012	1.2100e-003	0.2024	0.0534	1.1200e-003	0.0545		172.6608	172.6608	4.6000e-003	4.4400e-003	174.0982
Total	**0.0619**	**0.0444**	**0.5996**	**1.6900e-003**	**0.2012**	**1.2100e-003**	**0.2024**	**0.0534**	**1.1200e-003**	**0.0545**		**172.6608**	**172.6608**	**4.6000e-003**	**4.4400e-003**	**174.0982**

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129		2,872.6910	2,872.6910	0.9291		2,895.9182
Total	**1.7109**	**17.9359**	**14.7507**	**0.0297**	**7.0826**	**0.7749**	**7.8575**	**3.4247**	**0.7129**	**4.1377**		**2,872.6910**	**2,872.6910**	**0.9291**		**2,895.9182**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0516	0.0370	0.4996	1.4100e-003	0.1677	1.0100e-003	0.1687	0.0445	9.3000e-004	0.0454		143.8840	143.8840	3.8300e-003	3.7000e-003	145.0818
Total	**0.0516**	**0.0370**	**0.4996**	**1.4100e-003**	**0.1677**	**1.0100e-003**	**0.1687**	**0.0445**	**9.3000e-004**	**0.0454**		**143.8840**	**143.8840**	**3.8300e-003**	**3.7000e-003**	**145.0818**

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.1872	0.0000	3.1872	1.5411	0.0000	1.5411			0.0000			0.0000
Off-Road	1.0093	26.2791	18.9906	0.0297		0.7725	0.7725		0.7725	0.7725	0.0000	2,872.6910	2,872.6910	0.9291		2,895.9182
Total	**1.0093**	**26.2791**	**18.9906**	**0.0297**	**3.1872**	**0.7725**	**3.9596**	**1.5411**	**0.7725**	**2.3136**	**0.0000**	**2,872.6910**	**2,872.6910**	**0.9291**		**2,895.9182**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0516	0.0370	0.4996	1.4100e-003	0.1677	1.0100e-003	0.1687	0.0445	9.3000e-004	0.0454		143.8840	143.8840	3.8300e-003	3.7000e-003	145.0818
Total	**0.0516**	**0.0370**	**0.4996**	**1.4100e-003**	**0.1677**	**1.0100e-003**	**0.1687**	**0.0445**	**9.3000e-004**	**0.0454**		**143.8840**	**143.8840**	**3.8300e-003**	**3.7000e-003**	**145.0818**

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0612	2.2103	0.8436	0.0103	0.3523	0.0107	0.3630	0.1014	0.0102	0.1117		1,103.4117	1,103.4117	0.0368	0.1588	1,151.6511
Worker	0.4817	0.3453	4.6631	0.0131	1.5649	9.4400e-003	1.5743	0.4150	8.6900e-003	0.4237		1,342.9174	1,342.9174	0.0358	0.0345	1,354.0970
Total	**0.5428**	**2.5555**	**5.5067**	**0.0234**	**1.9172**	**0.0201**	**1.9373**	**0.5165**	**0.0189**	**0.5354**		**2,446.3291**	**2,446.3291**	**0.0725**	**0.1933**	**2,505.7481**

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0809	23.5544	17.8738	0.0269		0.9036	0.9036		0.9036	0.9036	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.0809**	**23.5544**	**17.8738**	**0.0269**		**0.9036**	**0.9036**		**0.9036**	**0.9036**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0612	2.2103	0.8436	0.0103	0.3523	0.0107	0.3630	0.1014	0.0102	0.1117		1,103.4117	1,103.4117	0.0368	0.1588	1,151.6511
Worker	0.4817	0.3453	4.6631	0.0131	1.5649	9.4400e-003	1.5743	0.4150	8.6900e-003	0.4237		1,342.9174	1,342.9174	0.0358	0.0345	1,354.0970
Total	**0.5428**	**2.5555**	**5.5067**	**0.0234**	**1.9172**	**0.0201**	**1.9373**	**0.5165**	**0.0189**	**0.5354**		**2,446.3291**	**2,446.3291**	**0.0725**	**0.1933**	**2,505.7481**

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	21.8459					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**22.0375**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0963	0.0691	0.9326	2.6200e-003	0.3130	1.8900e-003	0.3149	0.0830	1.7400e-003	0.0847		268.5835	268.5835	7.1600e-003	6.9000e-003	270.8194
Total	**0.0963**	**0.0691**	**0.9326**	**2.6200e-003**	**0.3130**	**1.8900e-003**	**0.3149**	**0.0830**	**1.7400e-003**	**0.0847**		**268.5835**	**268.5835**	**7.1600e-003**	**6.9000e-003**	**270.8194**

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	21.8459					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1139	2.3524	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**21.9598**	**2.3524**	**1.8324**	**2.9700e-003**		**0.0951**	**0.0951**		**0.0951**	**0.0951**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0963	0.0691	0.9326	2.6200e-003	0.3130	1.8900e-003	0.3149	0.0830	1.7400e-003	0.0847		268.5835	268.5835	7.1600e-003	6.9000e-003	270.8194
Total	**0.0963**	**0.0691**	**0.9326**	**2.6200e-003**	**0.3130**	**1.8900e-003**	**0.3149**	**0.0830**	**1.7400e-003**	**0.0847**		**268.5835**	**268.5835**	**7.1600e-003**	**6.9000e-003**	**270.8194**

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.3668					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3995**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**		**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0516	0.0370	0.4996	1.4100e-003	0.1677	1.0100e-003	0.1687	0.0445	9.3000e-004	0.0454		143.8840	143.8840	3.8300e-003	3.7000e-003	145.0818
Total	**0.0516**	**0.0370**	**0.4996**	**1.4100e-003**	**0.1677**	**1.0100e-003**	**0.1687**	**0.0445**	**9.3000e-004**	**0.0454**		**143.8840**	**143.8840**	**3.8300e-003**	**3.7000e-003**	**145.0818**

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Paving - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9311	20.1146	17.2957	0.0228		0.6670	0.6670		0.6670	0.6670	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.3668					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2979**	**20.1146**	**17.2957**	**0.0228**		**0.6670**	**0.6670**		**0.6670**	**0.6670**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0516	0.0370	0.4996	1.4100e-003	0.1677	1.0100e-003	0.1687	0.0445	9.3000e-004	0.0454		143.8840	143.8840	3.8300e-003	3.7000e-003	145.0818
Total	**0.0516**	**0.0370**	**0.4996**	**1.4100e-003**	**0.1677**	**1.0100e-003**	**0.1687**	**0.0445**	**9.3000e-004**	**0.0454**		**143.8840**	**143.8840**	**3.8300e-003**	**3.7000e-003**	**145.0818**

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.3566	8.4055	15.3177	0.0608	4.1407	0.0619	4.2025	1.1167	0.0586	1.1753		6,459.2865	6,459.2865	0.3389	0.6461	6,660.2983
Unmitigated	1.3566	8.4055	15.3177	0.0608	4.1407	0.0619	4.2025	1.1167	0.0586	1.1753		6,459.2865	6,459.2865	0.3389	0.6461	6,660.2983

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Refrigerated Warehouse-No Rail	31.99	31.99	31.99	190,926	190,926
Unrefrigerated Warehouse-No Rail	285.91	285.91	285.91	1,706,303	1,706,303
Total	317.90	317.90	317.90	1,897,229	1,897,229

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Refrigerated Warehouse-No	25.00	8.40	6.90	59.00	0.00	41.00	92	5	3

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Unrefrigerated Warehouse-No	25.00	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.542464	0.063735	0.188241	0.126899	0.023249	0.006239	0.010717	0.008079	0.000923	0.000604	0.024795	0.000702	0.003352
Parking Lot	0.542464	0.063735	0.188241	0.126899	0.023249	0.006239	0.010717	0.008079	0.000923	0.000604	0.024795	0.000702	0.003352
Refrigerated Warehouse-No Rail	0.250990	0.063735	0.188241	0.126899	0.023249	0.006239	0.062500	0.250000	0.000000	0.000000	0.024795	0.000000	0.003352
Unrefrigerated Warehouse-No Rail	0.336290	0.063735	0.188241	0.126899	0.023249	0.006239	0.055900	0.171300	0.000000	0.000000	0.024795	0.000000	0.003352

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	4.8100e-003	0.0437	0.0367	2.6000e-004		3.3200e-003	3.3200e-003		3.3200e-003	3.3200e-003		52.4422	52.4422	1.0100e-003	9.6000e-004	52.7539
NaturalGas Unmitigated	4.8100e-003	0.0437	0.0367	2.6000e-004		3.3200e-003	3.3200e-003		3.3200e-003	3.3200e-003		52.4422	52.4422	1.0100e-003	9.6000e-004	52.7539

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	51.9026	5.6000e-004	5.0900e-003	4.2700e-003	3.0000e-005		3.9000e-004	3.9000e-004		3.9000e-004	3.9000e-004		6.1062	6.1062	1.2000e-004	1.1000e-004	6.1425
Unrefrigerated Warehouse-No Rail	393.856	4.2500e-003	0.0386	0.0324	2.3000e-004		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003		46.3361	46.3361	8.9000e-004	8.5000e-004	46.6114
Total		**4.8100e-003**	**0.0437**	**0.0367**	**2.6000e-004**		**3.3200e-003**	**3.3200e-003**		**3.3200e-003**	**3.3200e-003**		**52.4422**	**52.4422**	**1.0100e-003**	**9.6000e-004**	**52.7539**

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	0.0519026	5.6000e-004	5.0900e-003	4.2700e-003	3.0000e-005		3.9000e-004	3.9000e-004		3.9000e-004	3.9000e-004		6.1062	6.1062	1.2000e-004	1.1000e-004	6.1425
Unrefrigerated Warehouse-No Rail	0.393856	4.2500e-003	0.0386	0.0324	2.3000e-004		2.9300e-003	2.9300e-003		2.9300e-003	2.9300e-003		46.3361	46.3361	8.9000e-004	8.5000e-004	46.6114
Total		**4.8100e-003**	**0.0437**	**0.0367**	**2.6000e-004**		**3.3200e-003**	**3.3200e-003**		**3.3200e-003**	**3.3200e-003**		**52.4422**	**52.4422**	**1.0100e-003**	**9.6000e-004**	**52.7539**

6.0 Area Detail

6.1 Mitigation Measures Area

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.1961	3.9000e-004	0.0428	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0919	0.0919	2.4000e-004		0.0979
Unmitigated	4.1961	3.9000e-004	0.0428	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0919	0.0919	2.4000e-004		0.0979

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4788					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.7133					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.9500e-003	3.9000e-004	0.0428	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0919	0.0919	2.4000e-004		0.0979
Total	**4.1961**	**3.9000e-004**	**0.0428**	**0.0000**		**1.5000e-004**	**1.5000e-004**		**1.5000e-004**	**1.5000e-004**		**0.0919**	**0.0919**	**2.4000e-004**		**0.0979**

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4788					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.7133					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.9500e-003	3.9000e-004	0.0428	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0919	0.0919	2.4000e-004		0.0979
Total	**4.1961**	**3.9000e-004**	**0.0428**	**0.0000**		**1.5000e-004**	**1.5000e-004**		**1.5000e-004**	**1.5000e-004**		**0.0919**	**0.0919**	**2.4000e-004**		**0.0979**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

12300 Lakeland Warehouse Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

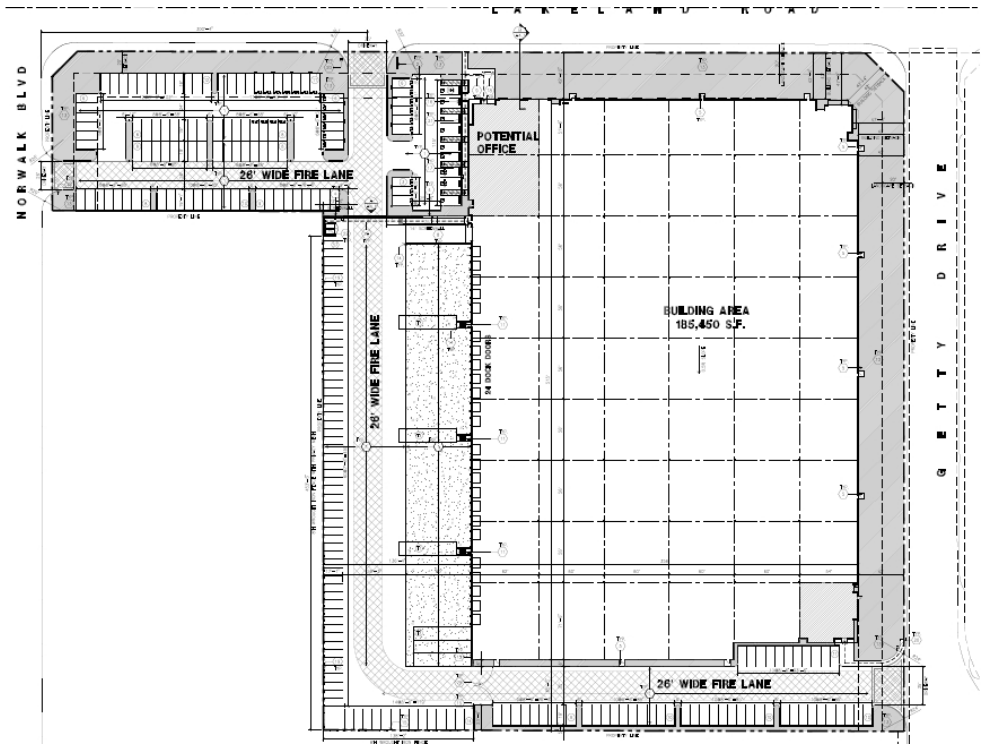
Equipment Type	Number

11.0 Vegetation

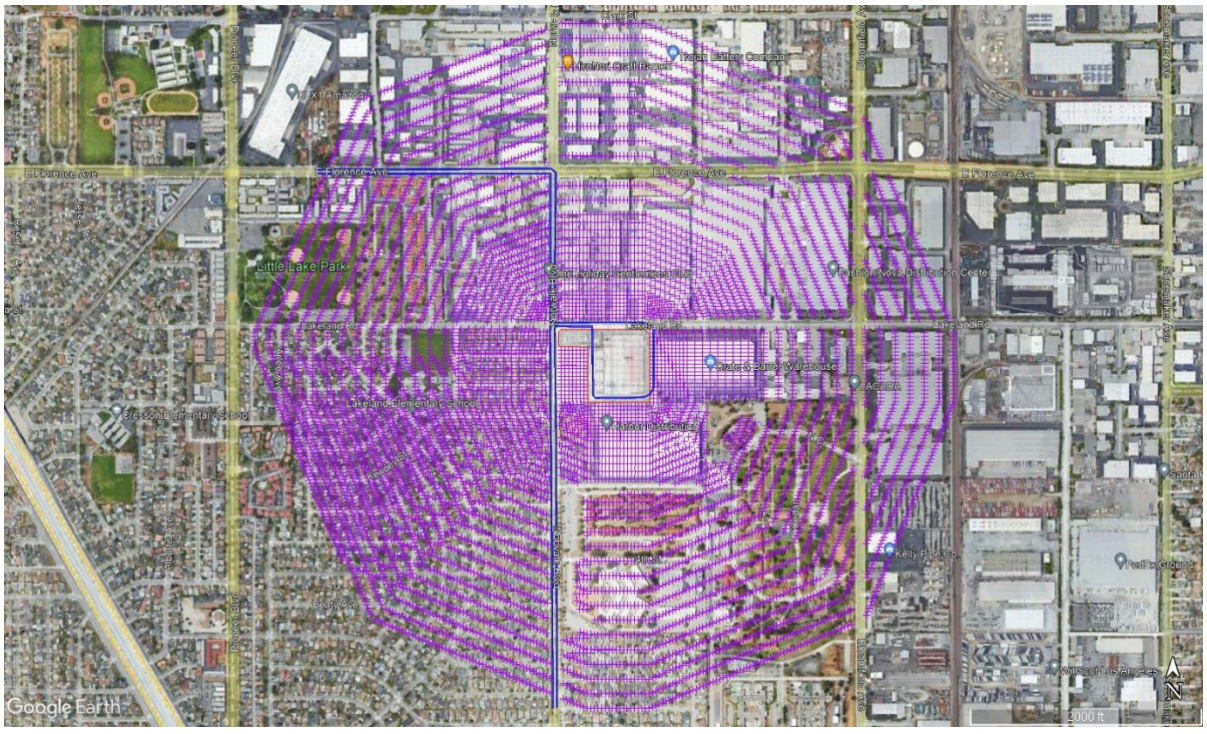
APPENDIX B

HRA MODEL OUTPUT

Site Plan



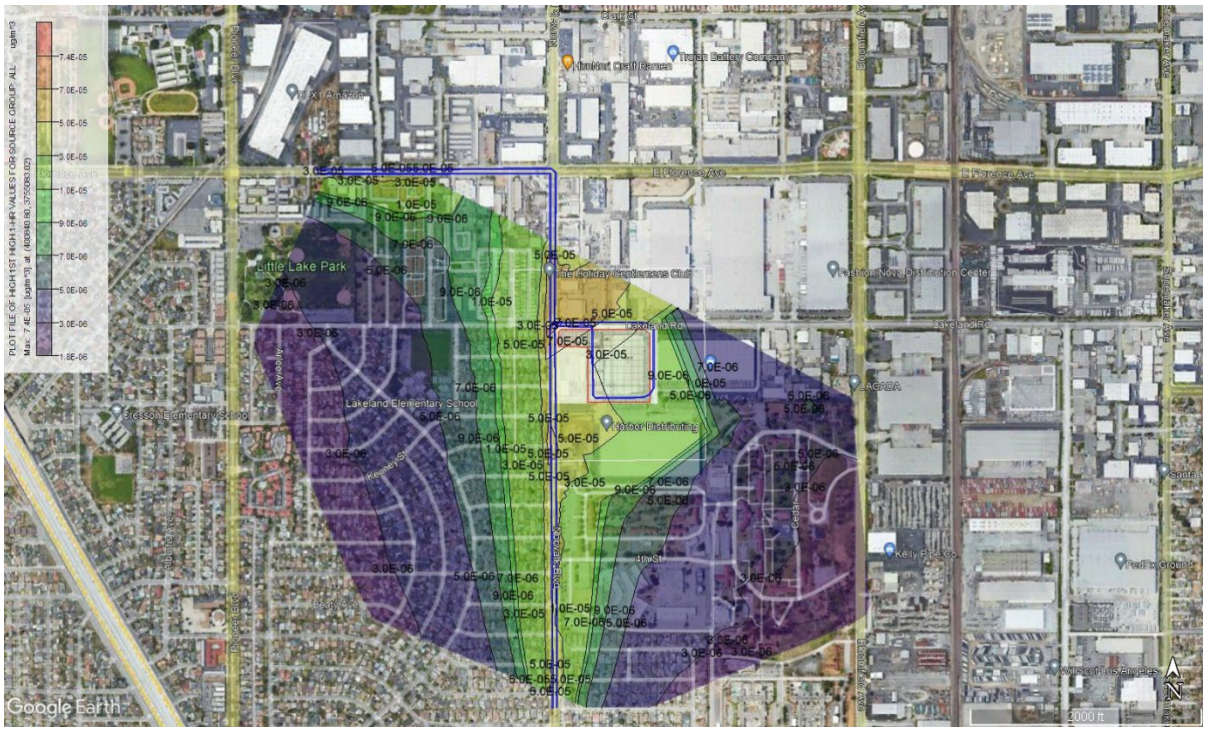
Receptors and Sources



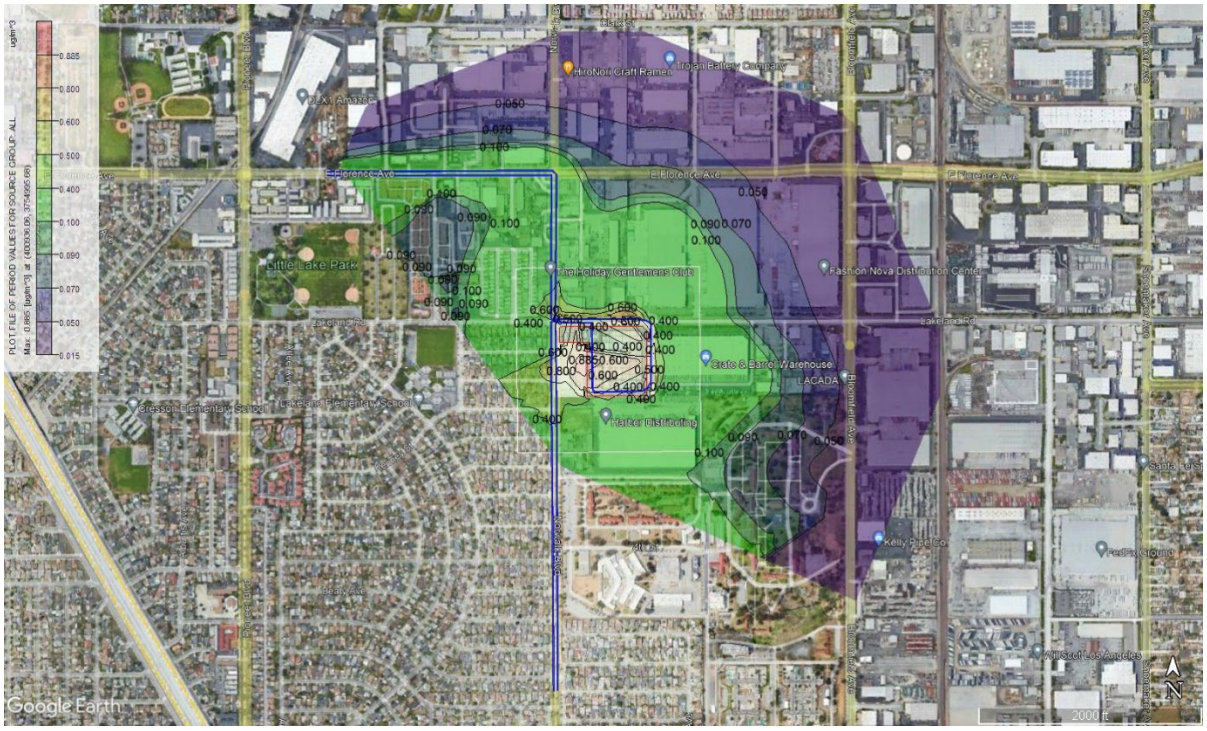
Sensitive Receptor Cancer Risk

Sensitive Receptor Chronic Hazard Index

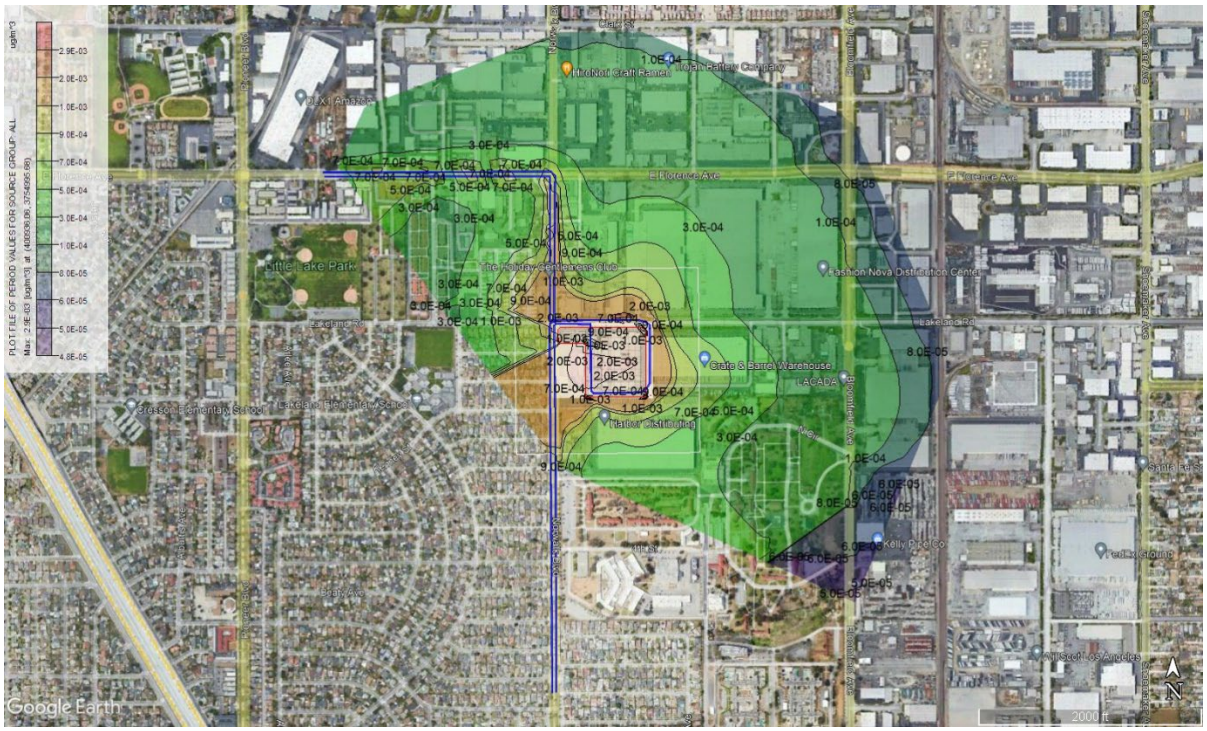
Sensitive Receptor Acute Hazard Index



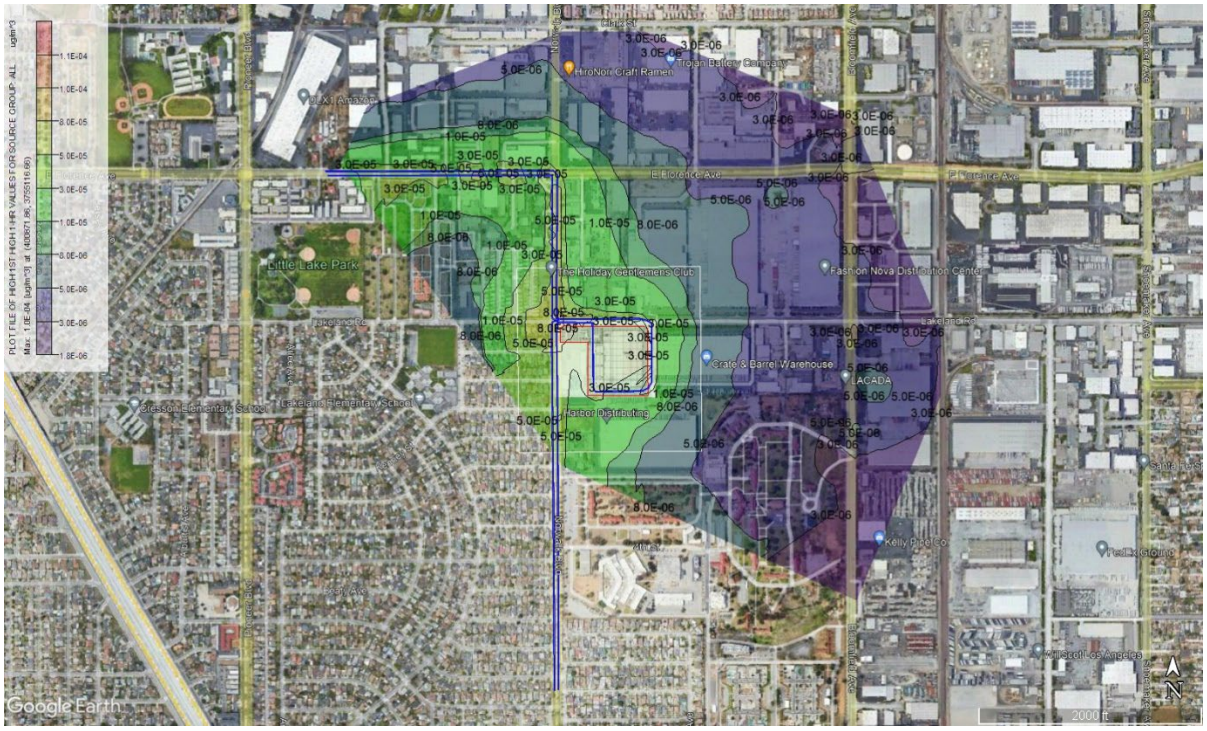
Worker Receptor Cancer Risk



Worker Receptor Chronic Hazard Index



Worker Receptor Acute Hazard Index



Operational	Worker Receptor	Sensitive Receptor
Cancer Risk (in a Million)	8.85E-01	5.54
Chronic HI	2.87E-03	1.65E-03
Acute HI	1.03E-04	7.40E-05

	Daily Trips				
	318				
	Passenger Vehicles	2-Axle Trks	3-Axle Trks	4-Axle Trks	Total
Percentage	72.5%	4.6%	5.7%	17.2%	100%
# Daily Vehicles	230.55	14.63	18.13	54.70	318
# Annual Vehicles	84,151	5,339	6,616	19,964	116,070

Truck Travel

Onsite Truck Travel Emissions			
Category	# of Trucks / Yr	% of Total	DPM EF (lb/Mile)
2-Axle Trks	5,339	16.7%	4.43E-05
3-Axle Trks	6,616	20.7%	1.27E-04
4-Axle Trks	19,964	62.5%	1.25E-04
Total	31,919	100%	---

DPM Lbs/ Yr	IN	Out	Total
Distance (m)	268.2	700.7	968.9
2-Axle Trks	7.39E-06	1.93E-05	2.67E-05
3-Axle Trks	2.12E-05	5.53E-05	7.64E-05
4-Axle Trks	2.08E-05	5.44E-05	7.53E-05
Total	4.94E-05	1.29E-04	1.78E-04

Offsite Truck Travel Emissions			
Category	# of Trucks / Yr	% of Total	DPM EF (lb/Mile)
2-Axle Trks	5,339	16.7%	5.62E-05
3-Axle Trks	6,616	20.7%	3.82E-05
4-Axle Trks	19,964	62.5%	5.83E-05
Total	31,919	100%	---

DPM Lbs/ Yr	NOR_NIN	NOR_NOUT	NOR_SIN	NOR_SOUT			Total
Distance (m)	1020	1031.3	997.4	1021.9			4070.6
2-Axle Trks	3.56E-05	3.60E-05	3.48E-05	3.57E-05	0.00E+00	0.00E+00	1.42E-04
3-Axle Trks	2.42E-05	2.45E-05	2.37E-05	2.43E-05	0.00E+00	0.00E+00	9.67E-05
4-Axle Trks	3.69E-05	3.73E-05	3.61E-05	3.70E-05	0.00E+00	0.00E+00	1.47E-04
Total	9.68E-05	9.78E-05	9.46E-05	9.69E-05	0.00E+00	0.00E+00	3.86E-04

Truck Idle

# of Idling Pts	10

Truck Idling					
Category	# of Trucks / Yr	Idle EF (lbs / Event)	Time (Hr)	Lbs/ Yr	Lbs / Yr /Unit
2-Axle Trks	5,339	6.22E-05	0.25	8.30E-02	8.30E-03
3-Axle Trks	6,616	8.48E-05	0.25	1.40E-01	1.40E-02
4-Axle Trks	19,964	9.49E-05	0.25	4.74E-01	4.74E-02
Total	31,919	--	--	6.97E-01	6.97E-02

TRUs

Percent of Trucks	10		# of Units	4	

Onsite TRU Emissions					
Category	Percentage	# of TRUs / Yr	Time (Hr)	*DPM EF (lbs/Event)	Emissions (lb/Yr)
2-Axle Trks	15.5	1,799	0.50	4.19E-03	3.77
3-Axle Trks	4.9	569			1.19
4-Axle Trks	24.3	2,821			5.91
Total	45	5,188	Emission/Unit		2.72

* TRU EF * BHP * Load factor * Time in hours

Vehicle Emissions

Vehicle Travel Percentage / Count			
Category	# of Vehicles / Yr	% LDA	% LDT
Passenger Vehicles	84,151	65%	35.12%
# Vehicles		54,597	29,554

Category	TOG Exhaust EF (lb/Mile)	TOG Runloss EF (lb/Mile)
LDA	4.55E-05	5.39E-04
LDT	9.58E-05	8.28E-04

CARB TOG Speciation Profile Run Exhaust			Lbs/yr	
CAS#	Chemical Name	Fraction	LDA	LDT
75070	Acetaldehyde	2.80E-03	6.96E-03	7.93E-03
107028	Acrolein	1.30E-03	3.23E-03	3.68E-03
71432	Benzene	2.47E-02	6.14E-02	6.99E-02
106990	1,3-Butadiene	5.50E-03	1.37E-02	1.56E-02
100414	Ethylbenzene	1.05E-02	2.61E-02	2.97E-02
50000	Formaldehyde	1.58E-02	3.93E-02	4.47E-02
110543	Hexane	1.60E-02	3.97E-02	4.53E-02
67561	Methanol	1.20E-03	2.98E-03	3.40E-03
78933	Methyl Ethyl Ketone	2.00E-04	4.97E-04	5.66E-04
91203	Naphthalene	5.00E-04	1.24E-03	1.42E-03
115071	Propylene	3.06E-02	7.60E-02	8.67E-02
100425	Styrene	1.20E-03	2.98E-03	3.40E-03
108883	Toluene	5.76E-02	1.43E-01	1.63E-01
1330207	Xylenes	4.80E-02	1.19E-01	1.36E-01
9901	Diesel	2.58E-02	3.10E+00	1.68E+00

CARB TOG Speciation Profile Evaporative Losses			Lbs/yr	
CAS#	Chemical Name	Fraction	LDA	LDT
71432	Benzene	3.600E-03	8.94E-03	1.02E-02
100414	Ethylbenzene	1.180E-03	2.93E-03	3.34E-03
110543	Hexane	1.540E-02	3.83E-02	4.36E-02
108883	Toluene	1.700E-02	4.22E-02	4.81E-02
1330207	Xylenes	5.780E-03	1.44E-02	1.64E-02

Vehicle Emissions Travel Summary

Emissions Summary				IN		Out		NOR_NIN		NOR_NOUT		NOR_SIN		NOR_SOUT		0		0		Total Percentage	Total Distance
				5.32%		13.90%		20.24%		20.46%		19.79%		20.28%		0.00%		0.00%		100.00%	5039.5
CAS#	Chemical Name	Lbs/ Hr	Lbs/ Yr	Lbs/ Hr	Lbs/ Yr	Lbs/ Hr	Lbs/ Yr	Lbs/ Hr	Lbs/ Yr	Lbs/ Hr	Lbs/ Yr	Lbs/ Hr	Lbs/ Yr	Lbs/ Hr	Lbs/ Yr	Lbs/ Hr	Lbs/ Yr	Lbs/ Hr	Lbs/ Yr	Lbs/ Hr	Lbs/ Yr
75070	Acetaldehyde	4.96E-06	1.49E-02	2.64E-07	7.92E-04	6.90E-07	2.07E-03	1.00E-06	3.01E-03	1.02E-06	3.05E-03	9.82E-07	2.95E-03	1.01E-06	3.02E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.96E-06	1.49E-02
107028	Acrolein	2.30E-06	6.91E-03	1.23E-07	3.68E-04	3.20E-07	9.61E-04	4.66E-07	1.40E-03	4.71E-07	1.41E-03	4.56E-07	1.37E-03	4.67E-07	1.40E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.30E-06	6.91E-03
71432	Benzene	5.01E-05	1.50E-01	2.67E-06	8.01E-03	6.97E-06	2.09E-02	1.01E-05	3.04E-02	1.03E-05	3.08E-02	9.92E-06	2.98E-02	1.02E-05	3.05E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.01E-05	1.50E-01
106990	1,3-Butadiene	9.75E-06	2.92E-02	5.19E-07	1.56E-03	1.36E-06	4.07E-03	1.97E-06	5.92E-03	1.99E-06	5.98E-03	1.93E-06	5.79E-03	1.98E-06	5.93E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.75E-06	2.92E-02
100414	Ethylbenzene	2.07E-05	6.21E-02	1.10E-06	3.30E-03	2.88E-06	8.63E-03	4.19E-06	1.26E-02	4.24E-06	1.27E-02	4.10E-06	1.23E-02	4.20E-06	1.26E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.07E-05	6.21E-02
50000	Formaldehyde	2.80E-05	8.40E-02	1.49E-06	4.47E-03	3.89E-06	1.17E-02	5.67E-06	1.70E-02	5.73E-06	1.72E-02	5.54E-06	1.66E-02	5.68E-06	1.70E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-05	8.40E-02
110543	Hexane	5.56E-05	1.67E-01	2.96E-06	8.88E-03	7.74E-06	2.32E-02	1.13E-05	3.38E-02	1.14E-05	3.42E-02	1.10E-05	3.30E-02	1.13E-05	3.38E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.56E-05	1.67E-01
67561	Methanol	2.13E-06	6.38E-03	1.13E-07	3.39E-04	2.96E-07	8.87E-04	4.30E-07	1.29E-03	4.35E-07	1.31E-03	4.21E-07	1.26E-03	4.31E-07	1.29E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.13E-06	6.38E-03
78933	Methyl Ethyl Ketone	3.54E-07	1.06E-03	1.89E-08	5.66E-05	4.93E-08	1.48E-04	7.17E-08	2.15E-04	7.25E-08	2.18E-04	7.01E-08	2.10E-04	7.19E-08	2.16E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-07	1.06E-03
91203	Naphthalene	8.86E-07	2.66E-03	4.72E-08	1.41E-04	1.23E-07	3.70E-04	1.79E-07	5.38E-04	1.81E-07	5.44E-04	1.75E-07	5.26E-04	1.80E-07	5.39E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.86E-07	2.66E-03
115071	Propylene	5.42E-05	1.63E-01	2.89E-06	8.66E-03	7.54E-06	2.26E-02	1.10E-05	3.29E-02	1.11E-05	3.33E-02	1.07E-05	3.22E-02	1.10E-05	3.30E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.42E-05	1.63E-01
100425	Styrene	2.13E-06	6.38E-03	1.13E-07	3.39E-04	2.96E-07	8.87E-04	4.30E-07	1.29E-03	4.35E-07	1.31E-03	4.21E-07	1.26E-03	4.31E-07	1.29E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.13E-06	6.38E-03
108883	Toluene	1.32E-04	3.97E-01	7.04E-06	2.11E-02	1.84E-05	5.51E-02	2.68E-05	8.03E-02	2.71E-05	8.12E-02	2.62E-05	7.85E-02	2.68E-05	8.04E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-04	3.97E-01
1330207	Xylenes	9.53E-05	2.86E-01	5.07E-06	1.52E-02	1.33E-05	3.98E-02	1.93E-05	5.79E-02	1.95E-05	5.85E-02	1.89E-05	5.66E-02	1.93E-05	5.80E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.53E-05	2.86E-01
9901	Diesel	1.59E-03	4.78E+00	8.49E-05	2.55E-01	2.22E-04	6.65E-01	3.23E-04	9.68E-01	3.26E-04	9.79E-01	3.16E-04	9.47E-01	3.23E-04	9.70E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-03	4.78E+00

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	PM2.5_RUNEX	PM10_RUNEX
Los Ange	2022	HHDT	Aggregate	5	Diesel	0.022520182	0.023538444
Los Ange	2022	HHDT	Aggregate	10	Diesel	0.019637889	0.020525827
Los Ange	2022	HHDT	Aggregate	15	Diesel	0.01554976	0.016252851
					Average	0.019235944	0.020105707
Los Ange	2022	LHDT1	Aggregate	5	Diesel	0.085318639	0.089176369
Los Ange	2022	LHDT1	Aggregate	10	Diesel	0.069448169	0.072588307
Los Ange	2022	LHDT1	Aggregate	15	Diesel	0.056965762	0.059541501
Los Ange	2022	LHDT2	Aggregate	5	Diesel	0.081440522	0.085122901
Los Ange	2022	LHDT2	Aggregate	10	Diesel	0.06677154	0.069790652
Los Ange	2022	LHDT2	Aggregate	15	Diesel	0.055080739	0.057571245
					Average	0.069170895	0.072298496
Los Ange	2022	MHDT	Aggregate	5	Diesel	0.069208672	0.072337981
Los Ange	2022	MHDT	Aggregate	10	Diesel	0.056559957	0.059117347
Los Ange	2022	MHDT	Aggregate	15	Diesel	0.036932159	0.038602068
					Average	0.054233596	0.056685799

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	Total VMT	CVMT	Diesel %	Trips	PM2.5_RUNEX	PM10_RUNEX	TOG_RUNEX	TOG_RUNLOSS
Los Ange	2022	LDA	Aggregate	Aggregate	Gasoline	3413352.258	134926121.9	134926121.9	0%	15900217.66	0.001522015	0.001655297	0.020639169	0.244501466
Los Ange	2022	LDA	Aggregate	Aggregate	Diesel	10030.88054	301513.2702	301513.2702	61%	41570.2352	0.033113935	0.0346112	0.060196711	0
							135227635.2	64.9%						
Los Ange	2022	LDT1	Aggregate	Aggregate	Gasoline	321949.9285	11615096.17	11615096.17	0%	1417103.809	0.002784622	0.003028204	0.082181753	0.64329646
Los Ange	2022	LDT1	Aggregate	Aggregate	Diesel	144.7940175	2969.140617	2969.140617	0.6%	429.3151446	0.258680775	0.270377172	0.377330832	0
Los Ange	2022	LDT2	Aggregate	Aggregate	Gasoline	1501511.569	61390140.69	61390140.69	0%	7055330.485	0.001596494	0.001736297	0.02756805	0.238614145
Los Ange	2022	LDT2	Aggregate	Aggregate	Diesel	4360.211277	190690.3067	190690.3067	39%	21120.42143	0.007680483	0.00802776	0.025077486	0
							73198896.31	35.1%	495173			Gasoline Avg EF	0.043462991	0.37547069

Diesel Wt EF 0.025787648

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	PM2.5_RUNEX	PM2.5_IDLEX	PM10_RUNEX	PM10_IDLEX
Los Ange	2022	HHDT	Aggregate	Aggregate	Diesel	48900.65764	6345154.042	6345154.042	0	752459.4646	0.025286361	0.041186245	0.026429698	0.043048504
Los Ange	2022	MHDT	Aggregate	Aggregate	Diesel	57828.4128	2453217.384	2453217.384	0	705969.5613	0.01658125	0.036807167	0.017330981	0.038471424
Los Ange	2022	LHDT1	Aggregate	Aggregate	Diesel	48774.90599	2108377.719	2108377.719	0	613526.9586	0.024751862	0.026970114	0.025871032	0.028189583
Los Ange	2022	LHDT2	Aggregate	Aggregate	Diesel	21545.40456	922900.7472	922900.7472	0	271014.0852	0.023986034	0.027018195	0.025070577	0.028239837
										Average	0.024368948	0.026994155	0.025470805	0.02821471

APPENDIX C

ENERGY CALCULATIONS

Construction Off-Road Equipment										
Phase	**Off-Road Equipment Type**	**Amount**	**Usage Hour/Day**	**Total Usage Days**	**Total Usage Hours/Equipment**	**Horsepower**	**Load Factor**	**Total Usage Hours/ Equipment**	**Horsepower-Hour**	**Fuel Usage (gallons)**
Demolition	Concrete/Industrial Saws	1	8	10	80	81	0.73	80	4730.4	242.19648
	Excavators	3	8	10	240	158	0.38	240	14409.6	737.77152
	Rubber Tired Dozers	2	8	10	160	247	0.4	160	15808	809.3696
Site Preparation	Rubber Tired Dozers	3	8	10	240	247	0.4	240	23712	1214.0544
	Tractors/Loaders/Backhoes	4	8	10	320	97	0.37	320	11484.8	588.02176
Grading	Excavators	1	8	15	120	158	0.38	120	7204.8	368.88576
	Graders	1	8	15	120	187	0.41	120	9200.4	471.06048
	Rubber Tired Dozers	1	8	15	120	247	0.4	120	11856	607.0272
	Tractors/Loaders/Backhoes	3	8	15	360	97	0.37	360	12920.4	661.52448
Building Construction	Cranes	1	7	160	1120	231	0.29	1120	75028.8	3841.47456
	Forklifts	3	8	160	3840	89	0.2	3840	68352	3499.6224
	Generator Sets	1	8	160	1280	84	0.74	1280	79564.8	4073.71776
	Tractors/Loaders/Backhoes	3	7	160	3360	97	0.37	3360	120590.4	6174.22848
	Welders	1	8	160	1280	46	0.45	1280	26496	1356.5952
Paving	Pavers	2	8	15	240	130	0.42	240	13104	670.9248
	Paving Equipment	2	8	15	240	132	0.36	240	11404.8	583.92576
	Rollers	2	8	15	240	80	0.38	240	7296	373.5552
Architectural Coating	Air Compressors	1	6	80	480	78	0.48	480	17971.2	920.12544
									Total	**27194.08128** Diesel

Construction Truck and Construction Worker Vehicle Fuel Efficiency				
		EMFAC 2021 Outputs		
Vehicle Type	Vehicle Class	Fuel Consumption (1,000 gallons/day)	VMT (miles/ day)	Fuel Efficency (miles/gallon)
Construction Truck	MHDT	287.1	2536528.5	8.8
	HHDT	1097.0	6475965.4	5.9
	HHDT/MHDT	-	-	7.4
Construction Worker Vehicle	LDA	4975.0	138838026.7	27.9
	LDT1	510.1	11907335.41	23.3
	LDT2	2782.6	62593838.94	22.5
	Worker Mix	-	-	25.4

Notes:

[1] For construction trucks assumes 50 percent HHDT and 50 percent MHDT vehicles, consistent with assumptions in CalEEMod for hauling trucks. For construction worker vehicles assumes 50 percent LDA, 25 percent LDT1, and 25 percent LDT2 vehicles, consistent with assumptions in CalEEMod for worker vehicles.

[2] EMFAC2021 was run for Los Angeles County for the construction year 2022. Data was aggregated over all vehicle model years and speed bins.

[3] The fuel efficiency was calculated by dividing the VMT (miles/day) by the fuel consumption (gallons/day).

Construction Vehicle Fuel Use - Diesel Vehicles						
Phase	Trip Type	Total Trips	Trip Length (miles)	Total VMT	Diesel Fuel Effiency (miles/gallon)	Fuel Usage (gallons/year)
Demolition	Hauling	307	20	6140	5.9	1040.7
Building Construction	Vendor	17600	6.9	121440	7.4	16410.8
					Total	**17451.5**

Diesel

[1] Assumes 100 percent HHDT vehicles for haul trucks and 50 percent HHDT/50 percent MHDT vehicles for MHDT, consistent with assumptions in CalEEMod.

[2] EMFAC2021 was run for Los Angeles County for the construction year 2022. Data was aggregated over all vehicle model years and speed bins.

[3] The fuel efficiency was calculated by dividing the VMT (miles/day) by the fuel consumption (gallons/day).

Construction Worker Vehicle Fuel Use - Gasoline Vehicles							
Phase	Total One-Way Trips/Day	Total Days	Total Trips	Trip Length (miles)	Total VMT	Gasoline Fuel Effiency (miles/gallon)	Fuel Usage (gallons/year)
Demolition	15	10	300	14.7	4410	25.4	173.6
Site Preparation	18	10	360	14.7	5292	25.4	208.3
Grading	15	15	450	14.7	6615	25.4	260.4
Building Construction	140	160	44800	14.7	658560	25.4	25927.6
Paving	15	15	450	14.7	6615	25.4	260.4
Architectural Coating	28	80	4480	14.7	65856	25.4	2592.8
						Total	**29423.1**

Gas

Total Construction Gasoline Usage	29423.1
Total Construction Diesel Usage	44645.6

Proposed Project Operational Trips			
Unrefrigerated Warehouse			
Vehicle Class	CalEEMod	Total Project Trips	Total Trips per Vehicle Class
LDA	0.33629	286	96.2
LDT1	0.063735	286	18.2
LDT2	0.188241	286	53.8
MDV	0.126899	286	36.3
LHD1	0.023249	286	6.6
LHD2	0.006239	286	1.8
MHD	0.0559	286	16.0
HHD	0.1713	286	49.0
OBUS	0	286	0.0
UBUS	0	286	0.0
MCY	0.024795	286	7.1
SBUS	0	286	0.0
MH	0.003352	286	1.0

Proposed Project Operational Trips			
Refrigerated Warehouse			
Vehicle Class	CalEEMod	Total Project	Total Trips per Vehicle Class
LDA	0.25099	32	8.0
LDT1	0.063735	32	2.0
LDT2	0.188241	32	6.0
MDV	0.126899	32	4.1
LHD1	0.023249	32	0.7
LHD2	0.006239	32	0.2
MHD	0.0625	32	2.0
HHD	0.25	32	8.0
OBUS	0	32	0.0
UBUS	0	32	0.0
MCY	0.024795	32	0.8
SBUS	0	32	0.0
MH	0.003352	32	0.1

Proposed Project Operational Trips – Fuel Efficiency						
Fuel	Vehicle Class	EMFAC2021 Outputs1				
		Fleet Mix (%)2	Consumption (1,000 gallons/day)	VMT (miles/day)	Fuel Efficiency3 (miles/gallon)	
Gas	LDA	53%	4,645.3	134,787,725.8	29.0	15.3
	LDT1	5%	480.5	11,637,172.8	24.2	1.1
	LDT2	26%	2,777.3	65,943,413.8	23.7	6.1
	MDV	14%	1,907.2	36,861,226.6	19.3	2.8
	LHD1	2%	372.6	5,033,814.9	13.5	0.3
	MCY	0%	24.1	992,732.0	41.2	0.2
	MH	0%	32.4	156,938.0	4.8	0.0
	Fleet Mix	–	–	–	25.8	25.8
Diesel	LHD2	11%	65.8	1,133,991.9	17.2	1.9
	MHDT	25%	290.8	2,592,299.6	8.9	2.2
	HHDT	64%	1,110.8	6,742,448.2	6.1	3.9
	Fleet Mix	–	–	–	8.0	8.0

Notes:

[1] EMFAC2021 was run for Los Angeles County for the operational year 2024. Data was aggregated over all vehicle model years and speed bins.

[2] Fleet mix is based on assumptions made in CalEEMod for the proposed project.

[3] The fuel efficiency was calculated by dividing the VMT (miles/day) by the fuel consumption (gallons/day).

Proposed Project Operational Trips – Fuel Usage						
Land Use	Total Annual VMT2 (miles/year)	Fuel Type	Portion of Fleet3 (%)	VMT by Fuel Type (miles/year)	Fleet Mix Efficiency4 (miles/gallon)	Fuel Usage (gallons/ year)
Unrefrigerated Warehouse	1,706,303	Gas	77%	1307985	25.8	50766.0
		Diesel	23%	398318	8.0	49884.5
Refrigerated Warehouse	190,926	Gas	68%	1162438	25.8	45116.9
		Diesel	32%	543865	8.0	68112.6
					Total Gasoline/year	**95882.9**
					Total Diesel/year	**117997.0**

Notes:

[1] Calculated for operational year 2024 only. Future years will likely use less fuel due to more efficient cars.

[2] Total VMT is based on project's trip generation and trip lengths.

[3] Fleet distribution is based on EMFAC2021 output and CalEEMod assumptions.

[4] Fuel efficiency is based on fuel consumption and VMT data from EMFAC2021 for Los Angeles County and total VMT.

Electricity Usage	
Electricity by Land Use	**kWh/year**
Unrefrigerated Warehouse	640223
Refrigerated Warehouse	310355
City Park	0
Parking Lot	32,620
Total	**983,198**

Natural Gas Usage			
Natural Gas by Land Use	**kBTU/year**	**BTU/year**	**therms/year**
Unrefrigerated Warehouse	143,758	143,758,000	1,438
Refrigerated Warehouse	18,945	18,944,500	189
City Park	0	-	0
Parking Lot	0	-	0
Total	**162,703**	**162,702,500**	**1,627**